

## 2021 ARIN Initial Slate of Candidates for the Board of Trustees, Advisory Council, and NRO Number Council

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## Board of Trustees Candidates

### Bram Abramson

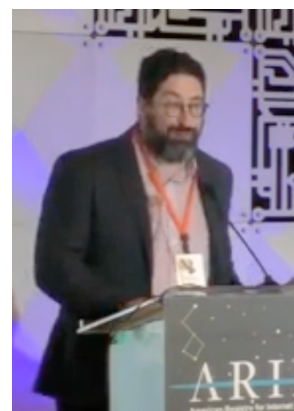
**Affiliation:** 32M

**Resume:** [Bram Abramson - resume.pdf](#)

### Board Member Requirements:

Potential ARIN Board Members are expected to thoroughly review Board Member Job Requirements as part of completing this questionnaire. Do you foresee any issues with fully executing those requirements and expectations? If yes, please provide specific details below.

This page sets out requirements and expectations regarding Trustee responsibilities; desired skills and experience; time commitment; and conflict of interest considerations. No, I do not foresee issues with fully executing these.



### Conflicts of Interest

**(a) Please disclose any conflicts of interest you may have that would impact your ability to perform your duty as a member of the ARIN Board of Trustees.**

Having reviewed ARIN's Conflict of Interest Statement and, separately, its Nomination and Appointment Conflict of Interest List ("Conflicts of Interest Policy"), I am not aware of any such conflicts.

**(b) How do you propose to resolve any conflicts identified in 2(a)?**

Not applicable.

**(c) Are you currently eligible to serve on the Board of Trustees according to the Conflicts of Interest Policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**(d) If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

Not applicable.

### Education

**(a) Please list any undergraduate degree(s) you received, the institution and the date issued;**

BA, Communications, with an additional curriculum in Community and Public Affairs. Concordia University, 1995.

BCL, Civil Law. McGill University, 2007.

JD, Common Law. McGill University, 2007.

**(b) List any graduate degree(s) you have received, the institution and the date issued;**

(Please see above.)

**(c) List any relevant professional development (non-degree granting) education and the date completed.**

- Certified In-House Counsel--Canada (CIC.C), Canadian Bar Association.
- Barrister-at-Law & Court Certificate of Qualification, Law Society of Ontario.
- Licensed Private Investor, Government of Ontario.
- Fellow of Information Privacy (CIPP/C/E, CIPM), International Association of Privacy Professionals.
- Certified Data Protection Officer--GDPR (ECPC-B DPO), European Centre on Privacy & Cybersecurity.
- Financial Intelligence Specialist (FIS), ManchesterCF & University of New Haven.

## **Present Job**

**(a) Please provide the name of any company or organization you currently are employed by or receive direct or indirect compensation from. Please describe the business of each such entity and your current title, and the office address of the business.**

Principal of 32M, a boutique digital rights & risks advisory firm. We provide consumer-forward legal, regulatory, and public policy guidance related to regulated technology competition, with a focus on the Canadian telecommunications, media, and fintech sectors.

## **Board Service**

**(a) Please identify any nonprofit or for-profit corporate board(s) you currently serve on, how long you have served and what offices, if any, you have held.**

Please note that, for completeness, I have included both board roles and related advisory committee roles.

Canadian Voice Peering Project -- Director (since 2020). This is a not-for-profit established to promote direct interconnection between PSTN networks.

Canadian Internet Registration Authority -- Community Investment Advisory Committee (since 2019). This is a committee established by CIRA to guide its community investment program, to which I was appointed by CIRA's board.

**(b) Similarly, please identify any nonprofit or for-profit corporate boards you served on in the past 10 years that are not included in answer to 5(a).**

Toronto Outdoor Picture Show -- director (2020-2021). This is a charitable organization which operates outdoor film festivals in Toronto parks during the summer.

Ontario Securities Commission -- FinTech Advisory Committee (2019-2020). This committee advised regulatory staff on matters relating to new financial technologies and innovative businesses in the securities industry.

Commission for Complaints for Telecom-television Services -- director & member of governance committee (2016-2018). This is a body established by Canada's telecommunications and broadcast regulator, to which complaints from consumers and small businesses are delegated. The seven-member board includes three industry representatives; I was elected as the representative of non-incumbent and smaller telecom providers.

Free Geek Toronto -- director (2016-2017). This Toronto social enterprise, established as CyberEquality Inc., works to repurpose old and unwanted computers, and related devices, in order to increase access to computing, promote the use of free and open-source software, reduce the impact of e-waste, and provide technical training to increase employability.

## **Related Experience**

**(a) Do you have any other industry related experience that you feel is relevant to your serving?**

I have worked in both financial and legal capacities, in the telecommunications and Internet sectors, for most of my professional life, and have been focussed on Internet infrastructure evolution from those points of view -- which require technical understanding, but are not technical roles -- since the mid-1990s. I have watched more and more of the spheres of everyday life, from audiovisual entertainment to interpersonal communication to government and financial services, become "over-the-top" applications conducted over the Internet, in ways that then reach back down to influence at a very basic level how the Internet is architected and run.

I have been involved with telecom and media regulation as these have evolved from "beauty contest" competitions between what someone thinks are the most deserving candidates, to more market-based approaches. That is not to say that a similar evolution is what is in the best interests of the IPv4 space -- but that I have professional experience in evaluating the arguments for optimizing different sides of the equation.

I have been the person focussed tightly on setting up law enforcement relations functions for an ISP and for a cryptocurrency provider, and have combined training with experience both as chief privacy officer and in implementing responsible approaches to anti-money-laundering. These, combined with broader legal experience around company formation, will stand ARIN in good stead in addressing similar questions on privacy, accuracy, and accountability as steward of sensitive registry information.

But don't take only my word for it. For a couple of years, now, the Board's guidance to the NomCom has included, in the recommended backgrounds to be considered, "[e]xperience and understanding of the areas of law related to ARIN's business". I have that, and would like to help.

**(b) What did you find the most rewarding from those experiences?**

I have enjoyed roles where I bring disparate ideas and people together to help craft solutions that make sense, but may not have been obvious. I achieved successes for clients, including my employers, when I was able to identify approaches that moved things forward without threatening anyone's entrenched position, treat those as low-hanging fruits for early wins, and build from there.

Engaging in that kind of work for ARIN would be energizing and deeply rewarding. I believe that bringing my ability to understand risks and opportunities in this sector, born of broad-based industry experience, will allow me to make a substantial contribution to ARIN's activities. ARIN benefits from excellent legal counsel. Complementing that function with a corresponding voice on the board would, I believe, enhance the organization's ability to guide implementation of legal advice in a way that is harmonious with other considerations from the get-go.

## Required Biography

**(a) Please provide here your full biographical information (attached separate resume or Curriculum Vitae is an acceptable substitution) including, if you choose, any data asked for in this questionnaire, and provide a brief description highlighting your experience relevant to the duties of the ARIN Board of Trustees. You may also optionally include additional web links to external websites (e.g. social media) though that may not be substituted for the aforementioned required biography.**

I first got involved with networking as SysOp of a FidoNet BBS, available at speeds as fast as 1200 bps, at age 15. I'm now a perpetually surprising number of years older, and hope I've picked up some relevant experience along the way.

Throughout, I've woven community involvement and university teaching into what I do -- activities I enjoy and which have honed my ability to connect with those I'm presenting to -- and various professional designations to help ensure I was meeting a baseline level of competency (Ontario bar membership, private investigator licence, privacy and anti-money-laundering designations, and a couple of mini- MBA programs intended for in-house counsel and for media industry participants). However, my post-university career has unfolded in three main phases, and is now proceeding down a fourth into which I would be glad to weave closer ARIN involvement.

### 1. TELECOM INDUSTRY ANALYST

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In 1998, I left graduate school at Université de Montréal to move to Washington, DC and map telecommunications infrastructure with a tiny company called TeleGeography. The Internet was in full blossom and my graduate studies in communication policy felt like they were beside the point. I spent three years analyzing telcos around the world and their infrastructure, scrutinizing corporate structures, parsing traceroutes, hanging out at conferences, and developing the kinds of critical lenses and spidey sense that are pretty similar to ARIN's work vetting

and registering address-holders. We put out statistics republished by the ITU, created wall maps of deployed cross-border Internet capacity, and tracked submarine cables. It was glorious.

After 9/11, I decided to head back to Canada, and joined the national telecom regulator (CRTC) to help build capacity for conducting industry analysis of competition. I again had to work with companies from all over the place -- here, mostly Canada -- creating analytic frameworks, handling confidential data, and aggregating it up to usable statistics with accompanying big-picture thought. But the government context imposed a kind of conservatism and cautiousness that were important lessons learned for those stewarding key resources. Just like ARIN.

## 2. TELECOM, DATA AND COMMUNICATIONS LAWYER

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While at the CRTC, it seemed to me that the lawyers had the most interesting jobs there, so I decided to become one. I ended up joining a big law firm rather than going back to the CRTC -- I wanted to be near family in Toronto -- and spent the next seven years or so apprenticing, then practicing, in the technology practice group of a major Canadian law firm. Our practice was unique in that it combined domestic communications industry advice on governance, corporate structure, and policy advocacy, with an important international telecom law reform practice. Most of the policy and regulatory work, and lots of the international work, were in multi-stakeholder proceedings on fairly arcane points. I was the only junior in a small group of greybeards and experienced counsel working on highly technical matters that mixed policy and technology. Our client base was diverse. Throughout we had to be scrupulous, careful, and creative in complex organizational settings. There isn't much there that isn't relevant to the role I'd play on ARIN's board.

## 3. IN-HOUSE COUNSEL

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I left private practice in 2014 to play, successively, two in-house roles. From 2014 to 2017, I was Chief Legal & Regulatory Officer at TekSavvy (AS5645), where the team I built -- most of which is still in place -- included a law enforcement relations function with a pro-privacy, pro-transparency bent. I was very active during this period in industry forums, like the Canadian Network Operators Consortium (CNOC), and in regulatory advocacy on technical matters.

Then, in 2018 and in 2019, I was General Counsel of a blockchain software company called Decentral Inc., which makes a software-as-a-service wallet. I was thrust into a whole new world of financial regulation, coalition-building in uncertain circumstances, and aspirational decentralization. It was 1998 all over again, only blockchain instead of Internet, with various blockchain networks adopting Internet governance features like RFCs wholesale. It was an eye-opening and reminder-filled immersion in the balance between enthusiasm, hardcore geekery, and big-picture context for scaling.

In between, I took a sabbatical of sorts as Open Web Fellow with the Mozilla Foundation (2017-2018). My fellowship was hosted by the Citizen Lab, a University of Toronto unit that does work on human rights and global cybersecurity. I learned that my skill set is better suited to advising on concrete situations than in an academic environment, but I enjoyed the chance to spend the year pursuing knowledge, speaking at conferences, and other things fellow-y.

**(b) Please explain your understanding of the role of ARIN's Board of Trustees. Provide a brief description highlighting your background and experience relevant to the duties of the ARIN Board of Trustees and explain how your background and experience will make you an effective member of the**

**Board of Trustees. Please note how your background and experience would help in addressing what you believe are ARIN's greatest challenges.**

ARIN is at something of a crossroads. ARIN is managing the downward glidepath of increasingly scarce IPv4 resources whose value, in many cases, are peaking or have peaked -- requiring that it engage in the kind of registrant analysis and anti-fraud activity that are the focus of an intense global conversation around corporate transparency, privacy, and data protection. At the same time, ARIN is stewarding a more plentiful resource in IPv6 numbers, establishing a foundation that avoids pairing abundance with sloppiness or cruff. Some places where these collide:

Around registrant transparency, a standards-based information ecosystem is emerging. Organizations like the Open Corporates Trust are evolving alongside global bodies like the Financial Action Task Force on Money Laundering. At the same time, the GDPR is finding echoes in countries interested in a free flow of data with Europe, spurred on by citizenries' enhanced awareness of privacy rights. How ARIN adopts metadata standards that allow it to participate in pro-privacy registrant transparency, with a foot in both camps, is the next chapter in the process.

Around law enforcement relations, there is a long row to hoe. ARIN has put markers in place. But this process will continue to evolve with technology and with policy. Proceduralizing these functions in ways that ensure consistency, and build trust through transparency, is the next step.

I know these areas. I've tackling anti-money-laundering from a privacy standpoint. I led Canada's first ISP transparency report. I'd be honoured to help steward how ARIN addresses them.

## **Board Discussion Topics**

**(a) As a member of the Board, what would your philosophy and goals be towards Board and Executive Management succession?**

Good succession planning goes to the core of a healthy organization. Board and management have to be attracted to the organization by, and perform their roles with, the sense that there is a longer future for them here that includes capacity-building and progression. Moves to ensure roles like the past chair and chair-elect are identified and seated in advance go into the same direction. ARIN has done a good job with initiatives like staggered terms and management succession charts. We have seen steady, sustained involvement by key board and advisory members, and by employees who remain with the organization as an excellent employer.

The challenge now will be to maintain that stickiness while widening the circle to a more diverse group that goes beyond informal ties to sweep in new demographics and enhances diversity. Initiatives like the fellowship program to bring in new energy are an important piece -- something I can attest to personally.

My philosophy is therefore one that prioritizes capacity-building and outreach from the bottom up: create permeability that lets enthusiasm seep in from the grassroots, bring good people in who want to build on that, and take the time to develop them. My goal is that non-insiders with outstanding potential feel comfortable getting involved, and supported in doing so. Diversity that reflects organic

involvement from ARIN's U.S. and non-U.S. members of all genders, particularly in the Caribbean and outside the Anglophone sphere, is the intended outcome.

**(b) Based upon your understanding of ARIN's current strategic plan, what opportunities or challenges do you foresee for the organization, which would influence the current or future strategic plans.**

ARIN's strategic plan includes strong accountability to membership, a mission-driven approach to law enforcement, a strong training focus, and upholding the multi-stakeholder model of policy formation. These will be challenged by ongoing real-world and technical developments, ranging from political and environmental instabilities, to the need to act quickly and effectively in ways that make consultation harder. In addition to the privacy- and security-related challenges described above, it seems to me that - as the blockchain hype has begun to give way to sustained conversations about how shared and distributed databases are evolving and ought to -- there will continue to be challenges around ARIN's information infrastructure itself. As ARIN continues to review and enhance online services in ways that both serve direct users and participate in larger ecosystems, it will need to consider how to marry resilience, accuracy, and anonymity.

**(c) Understanding and managing organizational and environmental risk is an important responsibility of the Board. What do you see as potential risks to the organization and how should the Board best discharge its responsibilities regarding risk?**

Continuity risks inherent to ARIN include a political environment that could threaten its organizational independence, third-party legal threats, and technical challenges around record retention and operations. The Board has a responsibility to review business continuity planning as well as the adequacy of controls that are in place, without getting involved in day-to-day operations. Doing that will involve working closely with the CEO to shape the kinds of dashboards and regular reporting that allow both the Board and, where appropriate, the community, to spot issues that need digging deeper into.

Community risks in which ARIN must avoid participating include the risk that its practices harm digital rights and freedoms, and the environment in which we operate. This could range from facilitating bad practices by state authorities, to not doing enough to secure the ecosystem against malicious or incompetent actors participating in it -- see RPKI. Adopting a pro-privacy, pro-security, and pro-rights approach, and a decision-making calculus that minimizes environmental footprint, and following through with initiatives that minimize inherent risk, are important ways in which to avoid these. But we can't do that with diverse and broad participation, and engagement with our communities, that helps us see threats to rights and to the environment we would miss.



Jeffrey Bedser

## Board Member Requirements

Potential ARIN Board Members are expected to thoroughly review Board Member Job Requirements as part of completing this questionnaire. Do you foresee any issues with fully executing those requirements and expectations? If yes, please provide specific details below.

No. I see no issues with fulfilling the board job requirements.

## Conflicts of Interest

(a) Please disclose any conflicts of interest you may have that would impact your ability to perform your duty as a member of the ARIN Board of Trustees.

I have no conflicts that would impact my ability to serve.

(b) How do you propose to resolve any conflicts identified in 2(a)?

n/a

(c) Are you currently eligible to serve on the Board of Trustees according to the Conflicts of Interest Policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?

Yes

(d) If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").

n/a

## Education

(a) Please list any undergraduate degree(s) you received, the institution and the date issued;

Rutgers College of Rutgers University. BA 1991

(b) List any graduate degree(s) you have received, the institution and the date issued;

n/a

(c) List any relevant professional development (non-degree granting) education and the date completed.



- CPP - Certified Protection Professional 1995
- CCCI - Certified Computer Crime Investigator 2001

## Present Job

**(a) Please provide the name of any company or organization you currently are employed by or receive direct or indirect compensation from. Please describe the business of each such entity and your current title, and the office address of the business.**

iThreat Cyber Group, Inc - Threat Intelligence services related to content protection, DNS Abuse, and physical threat monitoring. Founder, CEO, and Chair. 317 George Street, Suite 500, New Brunswick, NJ 08901

Public Interest Registry - registry operator of .ORG and several other gTLDs. Non-Executive Director (Vice-Chair), Reston VA.

## Board Service

**(a) Please identify any nonprofit or for-profit corporate board(s) you currently serve on, how long you have served and what offices, if any, you have held.**

Public Interest Registry - nonprofit - 2017 - 2024 - Secretary, Treasurer, Vice-Chair, Chair of F&I, Chair of R&A

Board Advisor - DNS Abuse Institute

iThreat Cyber Group Inc - for-profit - 2000 - Current - Chair, Secretary

IntegriChain Inc - for profit - 2009-2012 - non-executive director

**(b) Similarly, please identify any nonprofit or for-profit corporate boards you served on in the past 10 years that are not included in answer to 5(a).**

Palgrave Publications - Security Journal - Editorial Board 2003-

## Related Experience

**(a) Do you have any other industry related experience that you feel is relevant to your serving?**

Active in many DNS Abuse organizations such as MAAWG, APWG, and SLAMSPAM. Active in the United Nations Internet Governance Forum (IGF) as well as IGF USA.

Member of Asia Pacific TLD (APTLD) organization

Appointed to Security and Stability Committee for the ICANN BoD since 2007

Member European Internet Forum

**(b) What did you find the most rewarding from those experiences?**

Finding commonality amongst different parties. Using this commonality to assist in bringing parties together to solve problems and resolve larger issues. Understanding where different parties are viewing

issues (whether that be based on culture, nationality or job function, or role) and gaining insight that assists me with a better understanding of where critical paths to solutions may lie.

## Required Biography

**(a) Please provide here your full biographical information (attached separate resume or Curriculum Vitae is an acceptable substitution) including, if you choose, any data asked for in this questionnaire, and provide a brief description highlighting your experience relevant to the duties of the ARIN Board of Trustees. You may also optionally include additional web links to external websites (e.g. social media) though that may not be substituted for the aforementioned required biography.**

Jeffrey Bedser is an entrepreneur with extensive experience in investigations, threat intelligence, and the DNS. He is the founder of iThreat and has spent decades building technology, services, and solutions to understand, prevent and combat Internet abuse and crime. Mr. Bedser spent his early career in Fortune 100 global security functions. Mr. Bedser currently serves on the Public Interest Registry (.ORG) Board of Directors as the Vice Chairman.

### Volunteer Activities

- Security and Stability Advisory Committee - ICANN (2007 - )
- Cyber Threats Taskforce (ASIS International) Chairman (2000-2002)
- Joint Council for Information Age Crime (JCIAC), Member, BoD (2002-2007).
- IACP - Ad hoc Committee on Computer Crime and Digital Evidence (2006 - 2017)
- Security Journal (Palgrave MacMillan Ltd) - Editorial Board (2003 - )
- Cyber Crime Summit 2001 (and 2002) - Program originator, facilitator and coordinator
- Scout Master at BSA 2009-2017

### Publication

- The Impact of the Internet on Security, Security Journal, 2007, 20, (55-56) Palgrave Macmillan Ltd 0955-1622/07
- Law and Order in a Networked World, Security Counsel, CSO Magazine, March 2003, CXO Media Inc.
- Computer Forensics Chapter: Internet Crimes, Torts & Scams: Investigation & Remedies (Oxford University Press, 2009) <https://amzn.to/2leP4vX>
- SAC115 - SSAC Report on an Interoperable Approach to Addressing Abuse Handling in the DNS <https://www.icann.org/en/system/files/files/sac-115-en.pdf>

**(b) Please explain your understanding of the role of ARIN's Board of Trustees. Provide a brief description highlighting your background and experience relevant to the duties of the ARIN Board of Trustees and explain how your background and experience will make you an effective member of the Board of Trustees. Please note how your background and experience would help in addressing what you believe are ARIN's greatest challenges.**

Much like the function and responsibilities I hold on the PIR BoD, the ARIN BoT is a function of fiduciary responsibility to the organization and its financial health while a greater responsibility to the members of ARIN as its function a registry operator of public infrastructure.

I would bring to the board knowledge and experience within the DNS ecosystem of technical, policy, and financial experience. One of the greatest challenges I see ARIN facing in the coming years is the need to address DNS Abuse issues on a policy basis that allow ARIN to avoid the regulatory/limitations that could be implemented at the local government levels in the region that ARIN serves. I see a growing trend of governments passing legislation that is responsive to growing awareness and concerns over internet-enabled and originated cybercrime. I have been very involved in policy in practice developments whereby abuses can be addressed without giving up privacy or free speech by taking data driven approaches to mitigation.

## **Board Discussion Topics**

### **(a) As a member of the Board, what would your philosophy and goals be towards Board and Executive Management succession?**

There should be a viable rotation of board members based on terms that are timed to overlap to ensure continuity of multi-year plans. Executive management should always have an active success plan that involves grooming an internal staff member to assume their responsibilities in the event they are unable to do so. This may or may not be the actual successor, but allows for the smooth operations of the organization until formal processes may be run to choose the next person.

### **(b) Based upon your understanding of ARIN's current strategic plan, what opportunities or challenges do you foresee for the organization, which would influence the current or future strategic plans.**

Adoption of RKPI will continue to be an uphill battle. IPv6 deployment as depletion of IPv4 resources continues to impact the availability of numbers. Government engagement to avoid over-regulation. These are all challenges but also opportunities to provide better services and insights into the industry.

### **(c) Understanding and managing organizational and environmental risk is an important responsibility of the Board. What do you see as potential risks to the organization and how should the Board best discharge its responsibilities regarding risk?**

Already mentioned prior, but government regulatory efforts that impact access, free transit of data, and maintenance of privacy for users are real and viable risks. The board of trustees setting guidance and policy development within the organization to assist with mitigation of this critical risk.

## Peter Harrison

**Affiliation:** Colovore LLC

**Resume:** [Peter Harrison - resume.pdf](#)

### Board Member Requirements:

Potential ARIN Board Members are expected to thoroughly review Board Member Job Requirements as part of completing this questionnaire. Do you foresee any issues with fully executing those requirements and expectations? If yes, please provide specific details below.

None foreseen

### Conflicts of Interest

**(a) Please disclose any conflicts of interest you may have that would impact your ability to perform your duty as a member of the ARIN Board of Trustees.**

None known

**(b) How do you propose to resolve any conflicts identified in 2(a)?**

N/A

**(c) Are you currently eligible to serve on the Board of Trustees according to the Conflicts of Interest Policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**(d) If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

N/A

### Education

**(a) Please list any undergraduate degree(s) you received, the institution and the date issued;**

- Bachelor of Science in Electrical and Computer Engineering, Honors Graduate (1986)
- University of the West Indies, St. Augustine, Trinidad

**(b) List any graduate degree(s) you have received, the institution and the date issued;**



- Post-Graduate Diploma, Management Studies, With Distinction (1992)
- University of the West Indies, Mona, Jamaica
- Master of Business Administration (1994)
- Ivey School of Business, University of West Ontario, London, Ontario, Canada
- Post-Graduate Diploma, International Trade (1998)
- ICADE, Universidad Pontificia Comillas, Madrid, Spain

**(c) List any relevant professional development (non-degree granting) education and the date completed.**

- Cisco CCIE Emeritus #8710
- Stanford Advanced Project Management Certification, Stanford University, California, 2010

## **Present Job**

**(a) Please provide the name of any company or organization you currently are employed by or receive direct or indirect compensation from. Please describe the business of each such entity and your current title, and the office address of the business.**

CTO and Co-Founder  
Colovore LLC

Colovore is a carrier-neutral, high-density, retail colocation data center located in Silicon Valley. The facility minimally provisions each cabinet with a power circuit that can supply 20kW. The maximum power per cabinet currently provisioned is 50kW.

Board Chairman and President (2016 – Present)  
The Palisadoes Foundation LLC

Co-founded The Palisadoes Foundation 501(c)(3) non-profit organization dedicated to the promotion of technology creation in Jamaica. The signature program is the annual Calico Challenge, where Jamaican based university students work on open-source projects under the guidance of an industry mentor. Stipends are paid upon the completion of predefined goals.

This is a volunteer position. I get no compensation.

## **Board Service**

**(a) Please identify any nonprofit or for-profit corporate board(s) you currently serve on, how long you have served and what offices, if any, you have held.**

- Trustee, ARIN Board of Trustees 2019-2021
- ARIN Finance Committee, 2019-2021
- ARIN Compensation Committee 2021
- ARIN Governance Working Group, 2020-2021
- ARIN Community Grant Program Committee, 2019-2021

- Board Chairman and President, The Palisadoes Foundation. 2016 - Present

**(b) Similarly, please identify any nonprofit or for-profit corporate boards you served on in the past 10 years that are not included in answer to 5(a).**

None

## **Related Experience**

**(a) Do you have any other industry related experience that you feel is relevant to your serving?**

The skills and experience that are relevant to serving on the ARIN Board of Trustees are many.

As the CTO of a retail colocation datacenter operation with experience in IT, electrical and mechanical engineering direction, technical leadership, and program management, I face and overcome many of the challenges faced by small to medium sized businesses every day.

I have worked in government and private sector engineering roles in both the Caribbean and North America. My experience also includes industrial development and trade promotion roles in Latin America. I therefore have practical insights into the intra-regional challenges faced by our membership.

My network team helped to launch Netflix's video on demand service. At Google and eBay, I oversaw the deployment and repair of hundreds of thousands of Internet-facing servers. I also managed deploying fiber-to-the-home video infrastructure in multiple cities at Google Fiber. Without question I understand the complexities of hyper-scale IT infrastructure that many in ARIN's membership face.

The Palisadoes Foundation keeps my finger on the pulse of new approaches to STEM education. It also provides a profound understanding of working with internationally distributed volunteers and public-private sector partnerships in ways resembling ARIN.

I am certain that my background prior to joining the Board, and my daily industry involvement, are very relevant to my continued service as a Trustee.

**(b) What did you find the most rewarding from those experiences?**

I left the Caribbean to seek new opportunities in the nascent Internet that was growing explosively in Silicon Valley. It was an exciting time, and personally risky as I had a young family. I did not have a North American technical education and had to be persistent to get the benefit of the doubt, to be given the chance and to be heard. I was, and continue to be, the outsider.

I recognized early that I had to adapt quickly. I obtained the certifications and experience to earn the right to be considered. While working with the titans of the Internet, I used my knowledge of the inappropriate use of technology and processes in the context of the developing world to distill reality from the vapor.

This understanding of the duality of the Internet, not just between countries, but also between, urban and rural, access and isolation, prosperity and value engineering, talent and potential; and most importantly, groupthink and diversity, has been rewarding.

It has allowed me to convince private investors both large and small to take a chance on my Silicon Valley datacenter startup in one of the most competitive markets in the world. People, not venture capitalists, recognized my value. We have been successful against the odds.

This journey has been a constant march towards the goal of a better Internet for all. Visibly contributing to its recent development across the region has been very satisfying. My role as an ARIN Trustee brings this experience to bear in varied ways and continues my keen interest in making the internet instantaneous, everywhere for everyone.

I have learned a lot from my current role serving our community, with mentoring provided by both formal and casual encounters. I enjoy the interaction with colleagues and the friendships that have developed. Collaborating on a shared vision of the internet creating a better world has been very rewarding. I am certainly fortunate to have this opportunity working with such inspiring talent.

## Required Biography

**(a) Please provide here your full biographical information (attached separate resume or Curriculum Vitae is an acceptable substitution) including, if you choose, any data asked for in this questionnaire, and provide a brief description highlighting your experience relevant to the duties of the ARIN Board of Trustees. You may also optionally include additional web links to external websites (e.g. social media) though that may not be substituted for the aforementioned required biography.**

I've been fascinated by computers and networking since the early 1980s. I was the founding president of PCJAM, Jamaica's first personal computer users' group, and was the principal systems engineer responsible for the computerization of the island's tax collection and social security systems.

In later years I sought new opportunities as the western Caribbean representative for a Fortune 200 pharmaceuticals firm and became the international sales manager for a regional rum company. Before moving to Silicon Valley, I ran Trinidad and Tobago's first Panama based industrial trade office to Latin America.

I have since worked extensively in the Internet sector deploying large-scale data centers and web sites. This has included Google, where I helped manage global data center demand and capacity planning; the Google Fiber FTTH program and its initial data center infrastructure rollout; and YouTube's CDN server deployment and maintenance. Prior to Google, I was an Operations Director at eBay Advertising, where I managed the search engine grid infrastructure; and the Network Manager at Netflix, where I helped launch Netflix's streaming Internet Video technology.

I am currently the cofounder and CTO of Colovore, a high density, carrier neutral, retail colocation provider in Silicon Valley. Recently I founded the Palisadoes Foundation, a nonprofit organization aimed at promoting technology creation in the Caribbean via various educational programs.



As a member of the American Registry for Internet Numbers Board of Trustees, I participate in the Finance and Grant committees. I am also a member of the Governance Working Group..

Linux has been a part of my daily professional life and some of that experience was published by Prentice Hall when I wrote "The Linux Quick Fix Notebook".

I was a participant in the IEEE HSSG working group that created the 100G Ethernet standard, and spoke on the topic at conferences. I'm also a Cisco CCIE Emeritus.

My undergraduate engineering degree is from the University of the West Indies (UWI), Trinidad and Tobago. I later did post-graduate management studies at the UWI, Jamaica and received an MBA from the Ivey School of Business at the University of the Western Ontario. I have also studied at ICADE, Spain and ITESM in Mexico. I speak Spanish fluently.

In my quieter moments, I enjoy the art and literature of the Caribbean and Latin America. Long road bike rides, and distance swimming are other guilty pleasures. During the pandemic I revived my photography hobby with a small portfolio on Instagram. I also like to enjoy the many attractions of the San Francisco Bay Area with my family.

- Please see attached resume for details.

Links

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Social Media

- LinkedIn: <https://www.linkedin.com/in/colovore/>
- Other nonprofit, volunteer and professional interests:
- <http://www.simiya.com/interests/>
- GitHub: <https://github.com/palisadoes>
- Twitter: <https://twitter.com/p3terharrison>
- Instagram: <https://instagram.com/p3terharrison>

Palisadoes Foundation

- Wikipedia: [https://en.wikipedia.org/wiki/Palisadoes\\_Foundation](https://en.wikipedia.org/wiki/Palisadoes_Foundation)
- Website: <http://www.palisadoes.org>
- YouTube Channel: [https://www.youtube.com/watch?v=d3DU0xt\\_Wtw&list=PLv50qHwThIJU-KcBLaqR2CjulagEcHzke](https://www.youtube.com/watch?v=d3DU0xt_Wtw&list=PLv50qHwThIJU-KcBLaqR2CjulagEcHzke)

Publications

- The Linux Quick Fix Notebook, Prentice Hall: <https://www.oreilly.com/library/view/linux-quick-fix/0131861506/>
- IEEE Participation on 100Gbps Ethernet Feasibility (HSSG)
- Proposal for HSSG Objectives: [http://www.ieee802.org/3/hssg/public/july07/hays\\_02\\_0707.pdf](http://www.ieee802.org/3/hssg/public/july07/hays_02_0707.pdf)

- Proposal for 5 Criteria Responses:  
[http://www.ieee802.org/3/hssg/public/july07/jaeger\\_01\\_0707.pdf](http://www.ieee802.org/3/hssg/public/july07/jaeger_01_0707.pdf)
- Speaker at DesignCon 2008:  
<https://www.businesswire.com/news/home/20080129006021/en/Ethernet-Alliance-Demonstrates-Backplane-Ethernet-DesignCon-2008>
- Data Center Knowledge
  - Colovore Enters Silicon Valley Market:  
<http://www.datacenterknowledge.com/archives/2013/08/21/colovore>
  - Colovore Brings Liquid-Cooled Colo to Silicon Valley:  
<http://www.datacenterknowledge.com/archives/2014/06/11/colovore-brings-liquid-cooled-colo-silicon-valley>
- Data Center Frontier
  - As Power Densities Rise, Providers Lead With Cooling:  
<https://datacenterfrontier.com/managing-density-use-more-space-or-apply-more-cooling/>
  - AI Boom Boosts GPU Adoption, High-Density Cooling: <https://datacenterfrontier.com/ai-boom-boosts-gpu-adoption-high-density-cooling/>
- Jamaica Observer
  - UTech and UWI receive computer network equipment from Palisadoes Foundation:  
[http://www.jamaicaobserver.com/news/utech-and-uwi-receive-12-m-computer-network-equipment-from-palisadoes-foundation\\_123218](http://www.jamaicaobserver.com/news/utech-and-uwi-receive-12-m-computer-network-equipment-from-palisadoes-foundation_123218)
  - Jamaicans replicating Google's Summer of Code:  
[http://www.jamaicaobserver.com/magazines/career/Jamaicans-replicating-Google-s-Summer-of-Code\\_53661](http://www.jamaicaobserver.com/magazines/career/Jamaicans-replicating-Google-s-Summer-of-Code_53661)

**(b) Please explain your understanding of the role of ARIN's Board of Trustees. Provide a brief description highlighting your background and experience relevant to the duties of the ARIN Board of Trustees and explain how your background and experience will make you an effective member of the Board of Trustees. Please note how your background and experience would help in addressing what you believe are ARIN's greatest challenges.**

The Board of Trustees defines and maintains the purpose of ARIN. To achieve this, it oversees the organization's operational and electoral excellence in the pursuit of its strategic goals.

In a previous section I described how my life story has been rewarding, and how it has been a chronicle of adaptation.

At ARIN, I focus on the organization's longevity, specifically on its ability to adapt. For this to happen we must minimize operational distractions and interruptions so that we can better tackle the future. This means we must address and not ignore them.

As a member of the Finance Committee, I've participated in stricter controls, balanced budgets, and the selection of new vendors who are more invested in our destiny.

With RPKI and DNSSEC services, ARIN's technical operations need to exceed membership expectations. To help guarantee that these services are continuously available, our technical debt needs to be reduced

to acceptable levels, and our cyberattack exposure needs to be minimized. I have kept a constant eye on this progress.

My sustained support of the Government Affairs department's CaribNOG and CarPIF activities promotes Internet resiliency throughout the Caribbean. I've participated in regional government forums to better understand the landscape.

This understanding, and the previous activities mentioned, sets the stage.

As these base operational activities mature, we can better define our strategic future through a product management approach for our services. I use my involvement with the Grant Committee as the inspiration for creating new economic value for our membership and liaise with ARIN staff about developing new services.

ARIN collaborates and provides advisory services to a variety of institutional stakeholders. I have worked with multilateral agencies at ARIN, my foundation and in my working life. These ties need to be strengthened in new ways. Beyond establishing the rules of engagement in such fora, we must consider allocating more resources to the socio-economic advancement of our region. We need to evaluate methods that can scale while being both effective and meaningful. I will use my next term to make progress on these initiatives.

Up to this point I've described a classic change management approach, in other words, create operational stability so that the organization can focus on what it has long wanted to do.

We need to be bolder. The governance of the organization needs to mature to minimize the risk to its future. The nomination process is frequently debated and is being addressed. But there's more. The community needs to have a better understanding of what the Board does. The transition process for Board membership turnover needs to be finetuned. We need to explore new sources and representations of data to make strategic decisions. The Board structure and membership should be evaluated as part of a periodic review. These topics, and more, don't surface in our daily community communications but need to be addressed as part of my role on the Board's Governance Working Group.

It is gratifying to know that the membership believed that my prior life would be relevant to help ARIN's transformation from meeting the needs of the previous century, to exceeding those of the present. I know that support will continue.

## **Board Discussion Topics**

### **(a) As a member of the Board, what would your philosophy and goals be towards Board and Executive Management succession?**

Succession planning needs to be a structured process that ensures leadership continuity in these key positions. This should be done with minimum disruption, ensuring that operations can successfully continue during a change in control.

In the ARIN context, the most common scenarios would be turnover due to elections or planned resignations, and to a lesser extent, unpredictable emergencies. It must also consider ways to retain and develop current and future members in the roles.

It's not just about determining our next leaders. Success also depends on defining responsibilities among the Board, executives and staff so everyone understands their role in the event of a transition. This also helps to alleviate concerns among those involved.

ARIN potentially experiences Trustee turnover each year, and the board transition process is relatively well defined. The process is less so for the C-Level executive team as it is much rarer.

The Board needs to understand the complexity and responsibilities of executive roles by supporting and evaluating the executive team on a regular basis. We need to play a lead role in working with the executive team to develop and approve succession plans for various scenarios. This would include a process to develop key staff members and promote a culture that encourages professional development. The planning would also consider identifying skills that need to be replicated in the new executives versus those that could be developed among staff or board members.

Our annual guidance to the Nomination Committee outlines the mix of talent desired in trustee candidates for the board to be effective. Similarly, succession plans at the executive level should evaluate the skills, contacts, and expertise necessary to lead ARIN. They should also consider interim activities for the expected duration of the change. This helps to create the orderly transition the community would expect.

It's impossible to predict every scenario, but I have tried to highlight the most likely ones.

The common thread in these observations is a need to continuously evaluate our risk and determine ways to mitigate the impact should the need arise.

**(b) Based upon your understanding of ARIN's current strategic plan, what opportunities or challenges do you foresee for the organization, which would influence the current or future strategic plans.**

The provision of registry and routing security services depends heavily on the availability of our technical infrastructure. In my tenure we have suffered outages in this area due to taxing levels of technical debt and operational lapses. The staff have been extremely responsive in rectifying the situation. This does not mean we should relax. Ransomware attacks and other cybercrime are real threats to our infrastructure, the advertised hiring of a VP of security to address this concern is welcome. We cannot let down our guard, ARIN's value is in the information it provides. This information must be always available and trusted.

Continuous IPv6 adoption and promotion will continue to be technical and cultural challenges. As the administrative overhead of IPv4 exhaustion subsides, ARIN's softer roles will gain prominence. Its long-term positions in societal wellbeing namely cyber-security, education, transfers, privacy, regulation and law enforcement will be monitored more closely. This challenge isn't just technical as in RPKI or DNSSEC. As mentioned before, it also extends to ARINs data governance.

In summary, improving ARIN's operations will allow more time to focus on current and future strategic plans. Improved governance will also help by codifying best practices expectations with the executive team and improving participation by the community.

There are also very tangible opportunities.

Many of ARIN's activities are related to the IP resource provisioning and support needs, and the policy requirements our community. The feedback isn't always continuous and consistent. We need to invest in research and development partnerships to better understand relevant trends and opportunities related to the use of the resources under our stewardship.

For example, the ARIN registry data is regularly mined. We need to know why this is done and be aware of how it is aggregated with other data sources to create meaningful correlated information. It's possible that similar output data is being created by duplicated efforts from different groups.

Armed with a better knowledge of how this information is being used, we could create similar information from combinations of sources and make it globally available to our community. It is well known that major ISPs and content providers are major consumers of ARIN data for internal purposes, but governments wanting to assess the socio-economic value of the Internet would cherish this information for the public good. This is a product management opportunity that must not be ignored.

**(c) Understanding and managing organizational and environmental risk is an important responsibility of the Board. What do you see as potential risks to the organization and how should the Board best discharge its responsibilities regarding risk?**

The broad categories of risk that come to mind are due to:

- Partial support of, or deviation from, our stated mission,
- The inability of our strategies to meet our mission,
- Operational failures or deficiencies,
- External shocks beyond our control,
- Ethical lapses not covered by the rest.

The Board's role with risk is in its oversight not its management.

We should ensure that the policies and procedures designed and implemented by ARIN's executive risk management team are consistent with our strategy and risk appetite. Our responsibility also includes validating that these policies and procedures are functioning correctly. Finally, we must be satisfied that a risk culture of appropriate awareness, behaviors, judgments and escalations exists in keeping with ARIN's risk appetite.

Our attention should include taking steps to be aware of the type and size of ARIN's principal risks and require that the executive team be fully engaged in risk management as an integral component of strategy, culture and operations. This must also extend to our board committees so that the oversight function is coordinated and comprehensive.

Oversight implementation can include:

- The creation of a Risk Committee to oversee our risk posture with regular reporting to the Board.
- The continued regular review of a Board level risk register to help quantify our risk exposure. This would allow us to measure the degree of improvement and stimulate the review of new relevant areas. We must also be open to new analysis approaches.
- The addition of risk considerations to the charters of all committees.

Risk currently falls under the Finance Committee, but the topic is broader, extending beyond monetary considerations. The scope could be expanded with appropriate consultation.

## Advisory Council Candidates

### Jeffry Handal

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

<https://www.linkedin.com/in/jhandal/>

**2. Optionally provide one URL to a web page with biographical information.**

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Cisco

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

Jeffry Handal is a Technical Leader for Cisco Systems. He completed his Bachelors and Masters degrees in Electrical Engineering from Louisiana State University (LSU); and has over 18 years of experience in the area of information communication technology with special interest in IPv6, cybersecurity, big data, and experimental networks. Before joining Cisco, Jeffry was a very active customer always pushing the envelope designing and maintaining networks with new technologies, testing new protocols, and providing Cisco and others a large scale testbed for new products, features, and functionality. Currently, he plays an active role in several Cisco groups (e.g., TACops, IPv6 Ambassadors, Security Technical Advisory Group, Meraki).

Outside of work, Jeffry is an active volunteer in organizations ranging from search and rescue operations with the Air Force to humanitarian technology groups such as NetHope. He sits on several boards within IEEE, actively promotes IPv6 adoption via different task forces, volunteers to teach networking classes in third world countries, and promotes STEM for women and minorities. In addition, Jeffry serves the public through his participation in conferences and standards bodies (IETF, IEEE); speaking at local and international events (Internet2, CANS, IPv6 Summits, AI/ML Symposiums, IEEE events, WALC, Cisco Live); contributing to and reviewing publications; and appearing as a guest in podcasts like IPv6 Buzz and Meraki Unboxed. He is a big promoter of technological change for the betterment of humanity.

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

No conflict of interest existing.



**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

Not applicable.

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

None expected at this time.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

Yes, a long time ago. It was inspiring to see how many people care and want to preserve the good the Internet can bring to communities. However, my participation was at a distance not knowing who to talk to or engage with. How can one's voice be heard? Therefore, the suggestion would be to find ways for the community to engage with ARIN. This can range from how to do it to proactive outreach efforts.

**10. How do you think ARIN's function, scale, or role should change?**

The Internet has shown it can be a force of good for people, communities, and the economy. During the pandemic, access to it was that much more important and highlighted the need to improve and expand upon it. To expand, we need to be able to help it grow and be accessible to all. To do so, we must take a more active role in facilitating and encouraging the adoption of IPv6. This is where ARIN may change its role and focus to be a more active steward in guiding its members toward this goal rather than taking a neutral, bystander stance.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

Volunteering and working to improve lives through the use of technology has been in my blood since high school. To be more specific, it started with Hurricane Mitch in Honduras in 1998. It devastated the country, but the use of basic telecom systems to coordinate rescues and facilitate aid saved lives and made a terrible situation less bad.

As mentioned in my CV/bio summary previously, it is important to highlight my belief in technological change for the betterment of humanity. Therefore, a board position in an organization like ARIN that has a broad impact across the use of technology has the potential to do some good in the world.

**12. How do you separate your personal opinions from those of your organization and those of the community?**



Separating personal opinions from others that have a heavy influence on your person is not easy. It is human nature to blend them together. However, I have been lucky to have been volunteering in organizations like the IEEE, Civil Air Patrol, Community College Advisory boards, and other places for over 16 years. Practicing this separation in a conscious way requires discipline but is achievable. In addition, I have been fortunate to receive training in these volunteer positions and with my current employer to remove bias from my opinions.

**13. What areas of policy, if any, need more attention and why?**

Proactive IPv6 adoption encouragement. Policy may have the potential to help us get there.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

The legacy holders are likely those that helped give rise to the Internet and invested in it early on. We have to honor and respect that foundational commitment but explore why they are taking a risk in not evolving their relationship with ARIN. Is there something in policy holding them back? These are items we would need to research in order to make a recommendation and have a more informed thought.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

I am a strong believer in having accurate data to make properly informed decisions; the removal of unnecessary bureaucracy to improve processes; and the responsible use of resources to improve lives to support a community. Sometimes, these can be at odds. As good stewards of the Internet and the consumption of valuable resources like IP addresses, we must find a balance to encourage the adoption of ARIN procedures in such a way they are not a burden or detractor for those ARIN serves. In other words, if removing or reducing the burden of providing extensive justification for obtaining IP addresses encourages entities to work with ARIN more, this is a win for all parties involved.

**16. What do you believe to be ARIN's greatest challenges?**

ARIN, many times, is far removed from those it serves. Therefore, ARIN needs to look at how it remains relevant in the minds of those that depend on it but do not know it.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

I will abstain from making an improvement recommendation without listening, researching, and informing myself more about how the board works. Hence, the interest in the nomination. Thank you for understanding.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

Civil Air Patrol Aerospace Education: Recommended the adoption of STEM as a way to remain relevant in this technological world, and now, STEM activities are the most popular executed programs within aerospace education influencing today's youth in the Civil Air Patrol.

IEEE Standards Education Committee: Work with the IEEE Standards Association and Educational Activities Board on investing, creating policy, grants, and other programs related to standards and their importance to academia and the industry.

Lone Star Community College: Make a recommendation to the college on whether to pursue bachelor's degrees, which bachelor degrees, and what curriculum to include in them that will make the student relevant to the market and industry.

### **Kat Hunter**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

<https://www.linkedin.com/in/kathleen-k-hunter/>

**2. Optionally provide one URL to a web page with biographical information.**

<https://www.linkedin.com/in/kathleen-k-hunter/>

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Comcast LLC

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

For the last 17 years I have been an active member at ARIN meetings and participate in voting and open discussions. I have been attending ARIN meetings in person since 2004. I interact daily with ARIN's WHOIS database and occasionally staff to add and remove customers as requirements change.

I am completing my first term on the AC and I have been Vice Chair of the Advisory council for the last year. I have been assisting the AC working groups since entering my new role and have also been selected as a member of the ARIN Grant Selection Committee for 2021.

In addition, I manage the number resources for voice, video, and data for both the commercial and residential areas of Comcast to ensure IPv4 space is recycled within the organization while we deploy IPv6. Our team has had an all encompassing approach in ensuring appropriate utilization of space while managing the needs of the business and customers. I have both a technical and business view of all areas of business. I feel my broad yet technical view of a large ISP down to our end customers gives me the information and technical requirements I need to make inclusive decisions while working on policy. In addition, our team has been recently working on geolocation and fraud issues that has provided a new perspective on policy decisions.



I have also spent time as Communications Chair for TechWomen Philadelphia in which employees are given a voice and important time with executives while also receiving beneficial training. My experience in bringing the right people together has been an effective tool as an advisory council member.

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

I have no limitations on my ability to serve my full term in-region or out-of-region.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

n/a

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

None

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I have been attending ARIN meetings since 2004. I have participated on the mailing list as well as participated in open discussions at meetings both at the microphone and in offline conversation. I also attended and will continue to attend the women's lunches at ARIN and fall NANOG events. In addition to my general meeting participation, I have also served on the AC for one term. I have taken on a few policies and have gotten two of them adopted by the board after completing the full policy development process. I also have taken on additional responsibilities in my role as Vice Chair as I am additionally responsible for gathering meeting data for our monthly meetings, distributing new policies with the Chair as they arise, and assisting the Chair in our meetings.

**10. How do you think ARIN's function, scale, or role should change?**

Recently, working groups were put together within the Advisory Council to clarify the PDP, respond to Policy Experience Reports, and to clean up the NRPM language. I think ARIN is moving in the right directions to better improve the community experience by leveraging staff and the AC. There have been a lot of submissions of policy to accommodate the transfer market which helps to keep the IP space from being used for the wrong purposes. There are a few policies under discussion now that would resolve issues within the current NRPM. In addition to this, all of the working groups are working in

conjunction to clarify the tools and language we use. I think the working groups should continue the hard work they are doing to address all of the various issues they are working to resolve.

Participation seems to be a continued issue with ARIN. Typically we have two major meetings per year. There are standing rules in which policies cannot be moved from one status to the next without an official meeting. This gives the Advisory Council two times to get these policies through the process per year. The original two meetings were in person meetings and after this year, they will probably return to the same. However, I think we have seen some virtual meetings can be effective in moving policy along and gaining inciteful suggestions. I would love to see a third virtual meeting added in the middle of the year so we can get better community feedback and move policies along in the process. The mailing list is effective in its own way, however, we seem to get different contributors in meetings and PPML.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

In my day job, I have a unique view of both large ISPs down to the end users for voice, video, and data. Additionally, I have a lot of experience working with ARIN's WHOIS database and geolocation issues. I can easily separate my employers and personal views from community needs. I have been part of the ARIN community since 2004 and am very familiar with the NRPM and policy process. My first term on the advisory council has been very productive and I would like to continue working for the community.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

My personal opinions are based on 17 years of experience, both in my daily job and attending ARIN policy meetings. In addition, I now have experience as an AC member. My thoughts on this has not changed since I ran in 2018, ARIN policy is and should continue to be community driven. Over the years that I have attended and have been involved in policy discussions, the community has managed to get the policy written in a way that works best for most parties involved. If we find something is not right, that policy is revisited. My decisions will and have always been focused on what is best for the community as this has been beneficial for most.

**13. What areas of policy, if any, need more attention and why?**

We need to be v6 focused while understanding there will always be a transfer market. I would like to see some of the language around v4 streamlined. I do know the working groups are continuing this work and I am confident they are working on the right changes to try to accomplish this as the community is ready for it. There is very little language around RPKI in the current NRPM. As the security risks due to v4 depletion is becoming increasingly more prominent, there is a larger need to make sure we are doing what we can to prevent bad actors on the internet. ARIN is not the internet police, but should be doing everything we can to prevent overly open language that does not take risk mitigation into account

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

The legacy IP address holders are not subject to ARIN RSAs as they should not be since these legacy address holders existed before the formation of ARIN and helped to promote the creation of the internet. While accuracy of the registry has gained importance and I'd like to see legacy holders have

more accountability, the current policy in place for legacy IP holders seems to be appropriate at this time. (<https://www.arin.net/resources/legacy/services.html>)

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

I don't believe the flow of business should be impeded, but some justification should be required so a few large companies or firms do not end up with all of the IP addresses. Recipients should show at least some evidence that the space will be utilized.

IPv6, while not a scarce resource, should still show some justification for similar reasons. There should be a good faith effort by business to at least show they have requirements to use the space. However, because we have a larger pool, I believe we can be more lenient when it comes to size requirements.

**16. What do you believe to be ARIN's greatest challenges?**

Participation by end users and smaller communities seem to be a hurdle that ARIN has issues overcoming. ISPs, brokers, law enforcement, and telecoms all seem to understand the importance of participation, but there needs to be more effective outreach to end users. Many of them don't realize they can participate, even if it is just being part of discussion on the mailing lists. Those end users are important in creating true policies for everyone.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

It would be beneficial to voters to understand the track record of candidates that have served on the AC. A starting point could be consolidated attendance records made available to the community. This would be a helpful start as a member could have great opinions on policy, but if they only show up for a handful of meetings, they lose their effectiveness if their ideas are not shared and represented.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I am currently serving as a member of the Advisory Council and Vice Chair. I have additionally spent time as a co-chair of communications for TechWomen Philadelphia.

## Brian Jones

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

<https://www.linkedin.com/in/brianjusa/>

**2. Optionally provide one URL to a web page with biographical information.**

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Virginia Tech



**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

I have worked in IT at Virginia Tech for the last 36 years. I have participated in ARIN public policy discussions and meetings since around 2005 or so (I can't exactly remember).

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

I do not believe I have any conflicts of interest.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

I believe that I am currently eligible.

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

I do not have any limitations other than primary work duties that could take precedence in a critical outage.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

Networking with some of the most brilliant minds in the Internet world has been some of the most memorable and rewarding aspects of participating in ARIN meetings. I actually had Vint Cerf sit at my table at one of the ARIN meetings in Canada and he struck up a conversation with me about interstellar IP addressing and beyond IPv6. I would like to see ARIN get back to some in person meetings.

**10. How do you think ARIN's function, scale, or role should change?**

I would like to see a continued focus on IPv6 and promoting the future on the network with policies that support the move toward an Internet no longer dependent on legacy networking with bandaids such as NAT.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

Long term network guy that has been involved with networking at Virginia Tech since we employed a coax broadband mid-split data transport system. I have worked on networks since Vampire taps were a thing. I am the voting member for Virginia Tech with ARIN and have followed ARIN policy development for several years. I participate in PPML online discussions and ARIN meetings. I have even made a suggestion that was accepted and implemented to improve the two-factor experience with ARIN online.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

I compartmentalize work issues as strictly Virginia Tech related and follow their policy and procedure. I understand where my personal opinions begin and that representing Virginia Tech end and am very careful to represent each as independently as possible.

**13. What areas of policy, if any, need more attention and why?**

Probably need to focus on what parts of policy need to be altered to better support the future implementations of IPv6 and reduce the focus on IPv4 distribution policy and cut out the parts that can be removed since we have been out of legacy IP space for some time now.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

I think legacy IP holders have a right to keep their legacy holdings but should consider the benefits of coming under a signed agreement with ARIN. I know in my own organization they do not have a full enough understanding of the benefits on a wide enough scale to make any change with the legacy space. We do have an RSA agreement from 2006 when we applied for and received an IPv6 allocation. Legacy holders should have to carry the lions share of responsibility for their IP address space unless they have a signed LRSA.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

I think needs based justification is less necessary concerning IPv6 allocations, whereas legacy IP address space needs to be made available for small organizations when possible so that they have equal access to Internet resources as those with deep pockets and can afford to pay for those scarce resources.

**16. What do you believe to be ARIN's greatest challenges?**

Bringing in young technical talent willing to participate in Internet policy and regional Internet issues that is not turned off by the nitty gritty of policy development.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

I'm not sure how to answer this without having been a part of it personally. I would like the AC to be more approachable by those less inclined to participate in online discussions. There are valid concerns that go unheard and finding ways to get those out in discussion forums would be a good thing.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I have participated on committees with my job that have explored options such as disaster recovery and continuity of operations along with how these plans intersect with personnel policy. Policies came out of these committees that affected employee leave and compensation after being presented to management and university council.

**Karl Morin**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

**2. Optionally provide one URL to a web page with biographical information.**

<https://karlmorin.com/>

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Hive Data Center, QIX

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

Karl Morin is President of Hive Data Center and also acts as a consultant for many small networks to help them deploy BGP peering and IPv6. Karl also volunteers as a Board Member at QIX (Montreal Internet Exchange) and at OGIX (Ottawa Gatineau Internet Exchange) as a marketing committee member to help the Canadian peering ecosystem.

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**





N/A

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

N/A

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

In some unique circumstances, some data center operations may limit my abilities to attend in-person meetings.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

Yes - ARIN on the Road in Montreal

Meeting other local ASN operators was great. Some way to better break the ice between people would be great.

**10. How do you think ARIN's function, scale, or role should change?**

ARIN could look into establishing itself as a place to find best-practices regarding peering and IPv6 deployment. Currently, I feel like people only look at ARIN like a place to get IP resources.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

I am considered as young for the industry, and I bring a new vision to projects. I do not hesitate to ask questions regarding current ways of operating.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

It is pretty clear that not all networks have the same goals as my data center company. Having customers and partners in different fields allow me to have a point of view that understands many organisations (ISPs, enterprises, hosting companies, etc).

**13. What areas of policy, if any, need more attention and why?**

Public disclosure regarding IPv4 stock. RIPE publishes the amount of V4 ressources available, and ARIN could consider that as well.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

I believe more efforts should be done to invite legacy holders to make more efficient usage of their ressources. and return unused ones.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

I think it's great. ARIN must make sure that IP requests are backed by actual needs for the short-term future.

**16. What do you believe to be ARIN's greatest challenges?**

IPv6 education

**17. If you could improve any aspect of the ARIN AC, what would it be?**

I feel like ARIN could put AC members in a "more public" position, where members of the community could reach out to Council members to discuss. Without replacing email groups, the community would probably feel like their feedback is directly heard by ARIN when talking to AC members.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

As a board member at QIX, we have to manage the IX in a manner that allows all members to be satisfied with the peering ecosystem and allow new members to connect.

**Amy Potter**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

**2. Optionally provide one URL to a web page with biographical information.**

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

I work for Amazon Web Services.



**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

I have served on ARIN's Advisory Council since 2016, and have participated in ARIN policy development since 2013. I currently work for AWS as a Sr. Technical Business Developer responsible for IP address acquisition. Prior to this I worked as an IPv4 broker for many years, helping to shape the development of the IP address market. I graduated from Notre Dame Law School in 2011, where I focused on intellectual property and cyber law.

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

Throughout my tenure on the Advisory Council I have participated in the IP address market. For the first several years I worked as an IPv4 address broker, facilitating the sale and transfer of IPv4 address space. In 2020 I moved over to the buyer-side, and now acquire IPv4 addresses on behalf of my employer, AWS. I believe my experience in the market brings valuable insight to ARIN policy development, but that transparency about my past and present affiliations is necessary to avoid conflicts. When potential conflicts occur, I share relevant observations with my colleagues and express opinions based on my experience in the market, but abstain from voting when the conflict may bias my assessment of whether a proposed policy is fair and impartial or supported by the community.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

N/A

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

N/A

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I have been attending ARIN meetings since 2013, and serving on the Advisory Council since 2016. I find the sense of community and shared interest in crafting good policy incredibly rewarding. In order to craft good policy we need to take into account the perspectives of the various organizations that are impacted by ARIN policy. Community participation is essential for the AC to do its job well. As we start returning to in person meetings it is important we make participating easy and accessible. I'm in favor of a hybrid model of remote and in-person meetings, with increased options for remote participants to engage with those attending in person.

**10. How do you think ARIN's function, scale, or role should change?**

One of ARIN's key functions is to ensure the uniqueness of Internet number resources in the region. Maintaining an accurate registry is an essential aspect of this. I think we may need to consider increasing the resources we devote to fulfilling this goal. Registry accuracy is an issue during this present period of IPv4 exhaustion where much-needed resources lie dormant and forgotten. It is also likely to be an issue when IPv6 transition progresses and the contact ARIN has with recipients of Internet number resources decreases.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

I have extensive experience in the IP address market and bring insight into the activity that actually occurs, the ways that fraudulent activities take place and harm legitimate participants in the market, and the pressures organizations face as they struggle to acquire the resources they need to run their networks. This is key to crafting transfer policies that achieve the goals of the community. I also come from a legal background, which complements the knowledge base and skill sets of the rest of the Council.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

I identify potential sources of conflict, am transparent about them with the community and my colleagues on the AC, and seek out the opinions of others with different perspectives.

**13. What areas of policy, if any, need more attention and why?**

I think that we need to continue working to clean-up NRPM, ensuring that consistent language is used throughout the document and text crafted in the past is updated to reflect the current practices and dynamics of network operations.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

I think legacy IP address holders have the right to update, maintain, and transfer the registration for the space they hold. I believe they should perform some minimum level upkeep to maintain the accuracy of their registration; however, I do not think that the failure to do so should result in a loss of their rights except under egregious circumstances.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

I think that some level of needs-based justification is necessary to minimize speculation.

**16. What do you believe to be ARIN's greatest challenges?**

I think maintaining adequate community participation is going to be an ongoing challenge for ARIN policy development. Over the past 8 years I've seen participation decline as some of the more controversial issues have been addressed and de-escalated over time. If participation continues to decline there is a risk that we will not have input from a wide enough variety of stakeholders, and will

end up passing policies that are harmful to stakeholders that are no longer represented in policy discussions.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

I think we should make more of an effort to be accessible to the community and to encourage participation from a variety of stakeholders. Figuring out how to make members of the AC more accessible to remote conference participants is something I think we still need to fine-tune. I also think we should resume presenting PPCs at NANOG to gain feedback from a wider variety of network operators.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I have been advising the ARIN Board of Trustees on Internet number resource policy for the past 6 years in my capacity as a member of the AC.

**Kerrie Richards**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

<https://www.linkedin.com/in/kerriearichards>

**2. Optionally provide one URL to a web page with biographical information.**

<https://www.linkedin.com/in/kerriearichards>



**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Business Growth Rocket, Young Entrepreneurs Association of Jamaica, ISOC Jamaica Chapter

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

Kerrie Ann Vassall Richards  
Business Strategist | Business IT Consultant  
Passionate about growing businesses and improving lives using technology.

**Employment History**

Founder, Business Growth Rocket J U L Y 2 0 1 7 — P R E S E N T  
Entrepreneur Development Manager, The Branson Center of Entrepreneurship - Caribbean JAN 2 0 1 3  
— J U L Y 2 0 1 7  
Executive Director, ICT4D Jamaica J U N E 2 0 1 1 — D E C E M B E R 2 0 1 4

As the first Executive Director of the organization I was responsible for many of the key activities of the organization. Some of my work included:- Represent the organization on the National ICT Advisory Council- Maintain relationships with ICT Policy organizations such as: Caribbean Telecommunications Union (CTU), American Registry for Internet Numbers (ARIN), Diplomacy and Internet Governance (Diplo, Malta), - Coordinate and facilitate workshops, presentations, etc- Assist in fund raising activities and the the writing of grant proposals- Promote the organization through the use of social networking tools, attendance at professional mixers, etc. - Manage projects using project management methodologies.

**Current Voluntary Associations**

2018 Advisory Council-American Registry of Internet Numbers

2018 Board of Governors - El Instituto de Mandevilla

2020 Member - ISOC Jamaica

2021 Vice Chair - Community Management Committee -MCI

2021 Board of Advisors - Young Entrepreneurs Association of Jamaica

**Past Voluntary Associations**

2015-2018 Chairman Vision for Jamaica Coding LTD

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

There are no known conflicts of interest.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

n/a

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

No known limitations.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I enjoy seeing how involved the community is in the policy development process. No suggestion to improve as I think it is very transparent and open.

**10. How do you think ARIN's function, scale, or role should change?**

I think ARIN is moving in the right direction with offering more webinars for the various stakeholder groups. I also like the fellowship and grant program because it increases the impact of the organization in geographies that may have never heard of ARIN before.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

I have been involved in the ICT4D scene in the Caribbean since 2011 and I have seen those initiatives run their course. In the Caribbean we have infrastructural challenges that affect resilience and my involvement in various initiatives and my experience on the AC since 2018 positions me to mentor other Caribbean nationals who want to enter the internet number policy space.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

As a community leader I understand the importance of seeking the consensus of those being affected by policy. I know that my personal opinion is to be set aside in the policy development and analysis process.

**13. What areas of policy, if any, need more attention and why?**

I am happy to be sitting on 1 of the working groups examining a key part of the policy development tool as well as shepherding and co-shepherding on policy. The work of the working groups has started to produce policies with solid footing.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

All IP holders have rights and responsibilities and policy needs to cover the needs of both. Legacy IP address holders are covered by the LRSA which is in keeping with the framework in 4/5 of RIRs.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

n/a

**16. What do you believe to be ARIN's greatest challenges?**

I think ARIN is very transparent especially for the size of the operation and geographical reach. The value prop meets the needs of the customer and stakeholder segments it serves. No challenges that I am aware of.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

Currently no suggestions

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I have sat on various community development boards in several capacities. Most applicable to this is my work with ARIN since 2018 as well as work with the National ICT Advisory Committee from 2011-2015 and as a founding member of ISOC Jamaica

### **Sami Sabat**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

<https://www.linkedin.com/in/sami-sabat-9783b59/>

**2. Optionally provide one URL to a web page with biographical information.**

<https://www.linkedin.com/in/sami-sabat-9783b59/>

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Right Tech Internet Inc.



**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

Driven, skilled and highly motivated Telecommunications and Project Management professional with 25+ years of progressively combined and proven experience in Network Analysis, Contracting, Business Analysis, Network Infrastructure, Construction, Wireless Operations, Radio Communication, Risk Management, Scheduling, Cost Control, Strategic Planning, Reporting, Change Management, Procurement, Client & Vendor Management, Process Planning, Forecasting, Training, Operations, Project Coordination and related scenarios. Actively seeking a full-time position with your company in the realm of my expertise and broad experience. I aspire to help your organization attain its goals by using my robust organizational skills, genuine passion for professional excellence, highly refined time management abilities and dynamic results-driven work ethic in fast paced multidisciplinary independent or team client-centric environments

### **CAREER HIGHLIGHTS**

- Highly developed and proven creative, operational and results-driven abilities
- Refined leadership, negotiating and management skills empowered through years of experience
- Diligent and professionally cemented attention to detail in building client relationship skills, intricate ability to think outside the box
- Successfully advised 20+ international radio projects for both service providers and vendors in areas including: strategy, business plan development, target market definition, technology assessment and



selections, spectrum acquisition, and partnership development

- Solid experience in delivering critical projects on-time, within scope and within budget
- Strong ability to coordinate project resources and third parties/vendors for the execution of projects

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

none

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

yes no conflicts

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

none

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

none

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I have not participated in any of ARIN's procedures in the past

**10. How do you think ARIN's function, scale, or role should change?**

I don't see any reduction in the role of ARIN in the wake of exhaustion. Instead of issuing new space, I believe that time and effort still takes place for waitlist and transfers along with new ASNs and Legacy services. More time would probably be spent in speeding up recovery of Non Legacy IPv4 space. I expect the IPv4 transfer market to be a strong policy focus for several more years. I expect the focus on the IPv4 transfer market to wane as IPv4 becomes a legacy technology. for several more years of a medium level of IPv6 policy work as more and more entities deploy IPv6. As uptake for IPv6 accelerates in certain sectors of the market, new policies tailored for those sectors could be helpful.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

In my current role, I provide advice to many Telecom CEO's on technology related matters. Because we are essentially consumer advocates, my professional opinions and by extension the advice I provide is often influenced by input from the consumers I interact with. Fundamentally it is about creating a balance and ensuring that the long term viability of the internet is maintained.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

As an international Consultant , I have had extensive experience and practice separating my own views from those of organizations I represent or with which I am affiliated. Accordingly, I do not see this as being an issue.

**13. What areas of policy, if any, need more attention and why?**

Reaching out to large organizations to have a better presence at conferences where they can represent ARIN and discuss IPv6 in more details

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

Legacy IP Address holders have the right to practice self-governance over the addresses assigned to them , however with rights comes responsibilities. Legacy IP address holders must be practice caution, not to be the lured by the financial gain to reassign “sell” or lease their IP addresses to un lawful entities who may offer attractive compensation in return .

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

We must create a balance between responsibilities to ensure the stability of the transfer market. In particular, we must write policy which prevents opportunistic market manipulation, while serving the community to ensure that organizations are able to get the space they need, as much as is practical given differences in various regions’ needs, and that we should react to evidence of market manipulation when it arises.

**16. What do you believe to be ARIN's greatest challenges?**

I believe that the transition of ARIN’s role in IPv4 allocations from steward of a held resource (i.e. allocating space from the free pools) to a registry of IPv4 transfers has something of an identity crisis among RIRs. RIRs are adopting divergent policies for transfers, creating loopholes and opportunities for arbitrage, which at some point should be reconciled. The number of invalid/inaccurate records in the WHOIS database also represents a need for ARIN to adapt to increased scrutiny of these records. Both the network security community and enforcement agencies have expressed the desire for ARIN to take a more active role in ensure the accuracy of WHOIS, and potentially take punitive measures against holders of resources with invalid POC data attached. Law enforcement’s interest, in particular, carries the implied threat of legislation to force the issue if we cannot resolve this issue independently.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

I am of the view that the ARIN AC performs very well at the present time. A lot of that has to do with the the excellent leadership provided by the current Chair and Vice-Chair, and the ARIN Staff .

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

My current role as a broadband consultant requires me to advise the CEO's on technology related matters. This involves me staying abreast with emerging technology trends and regular interaction with public and private sector organizations, understanding their needs and based on such needs, contribute to the development of policies to address these needs while ensuring that the needs of the wider community are not negatively impacted .

**Robert Seastrom**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

**2. Optionally provide one URL to a web page with biographical information.**

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Capital One, ClueTrust

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

Robert Seastrom works in the Cyber CTO's office at Capital One, where his background in building Internet infrastructure contributes to building scalable and secure banking infrastructure. His industry experience spans a quarter century of engineering and management positions at small and large ISPs, hosting providers, and maintaining critical Internet infrastructure. Robert has held positions at Neustar, Time Warner Cable, Afiliast, Neutral Net, Inter.Net Global Ltd., Akamai Technologies, AboveNet Communications, and Digex, and built pioneering ISPs in Japan and the Republic of Georgia. His nonprofit service includes serving as a Trusted Community Representative (Crypto Officer) for signing the DNSSEC root, co-founding and serving as first president of the Cambridge Bandwidth Consortium (a cooperative ISP in Massachusetts), the NANOG Board of Directors, and board positions with educational organizations related to amateur radio and firearm safety.

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

I have no conflicts of interest. I personally (OrgID RES-Z) hold a /23 of legacy IPv4 space and an ASN; I signed the Legacy Registration Services Agreement in 2010. I don't consider this a conflict of interest so much as an opportunity for conflict of interest or poor optics if not disclosed. I believe that disclosure here amply addresses the issue. ARIN has a long history of Board and AC members who come from the Community and thus are personally or through their business customers of ARIN.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes.

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

N/A

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

None.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I have attended ARIN meetings since 2003. I enjoy participating in the public policy process and interacting with various stakeholders to seek out the sweet spot for ARIN's administration of number resources in a fair and equitable way. Restrictions on face-to-face meetings brought on by the COVID-19 pandemic have highlighted both the plusses and minuses of an all-virtual meeting - particularly it has allowed participation on a more equal footing by those who would not have been able to attend. I hope that even as we return to in-person meetings we can elevate and normalize remote participation so that it feels less different from the in-person meetings than it has in the past.

**10. How do you think ARIN's function, scale, or role should change?**

I have been pleased to be involved as ARIN evolved from "the people that say 'no' to your address space request" into "the organization that tries to figure out the way to get to 'yes'". Continuing that evolution is critical as it sets the standard for "IPv6 thinking" - there is neither a dwindling IPv4 free pool to protect nor a scarce remaining supply of 16 bit ASNs to worry about, and ARIN's educational materials in "how to think about IPv6 numbering plans" are top notch.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

I'm the longest serving member currently on the AC and have a breadth of technical experiences (network design, operations, critical infrastructure, systems, application stack, security) that help me contextualize proposed policy and offer constructive suggestions for improving existing policy.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

My personal opinions are formed around what's best for the community, and are informed by listening to stakeholders from the community. I tend to be fairly quiet on various mailing lists \*because I am

listening, not talking\*. As for my organization, they understand that my duty is to ARIN and the ARIN community and that what is good for the Internet is good for my organization, even if it might result in policy changes that we might find a little inconvenient.

**13. What areas of policy, if any, need more attention and why?**

Cleanup of outdated and historical policy related to IPv4. Emphasis that default allocations and assignments of IPv6 space are \_minimums\_, not \_one size fits all\_, and that more is possible.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

Broadly, I encourage legacy number resource holders to get engaged in the governance process, support or author policy proposals which they believe address their concerns, and formalize their relationship with ARIN by putting their holdings under RSA. ARIN maintains only skeletal legacy services for non-RSA-signatory legacy resource holders; I both support continuing this practice unmodified, and not extending enhanced services such as number resource transfers and RPKI to non-signatories.

Periodically I am asked about number resource transfer outside of the ARIN framework, usually accompanied with the assertion that the address space is legacy and therefore "not subject to ARIN" or something similar. I've found that putting this situation in terms of "business risk" and asking if their Board would be OK with no official formalization of a several hundred thousand dollar transaction adds a whole bunch of clarity.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

We have always had needs-based justification for number resources, even back to the days of SRI-NIC. What has changed over time is what supporting information one must supply in order to get the resources that one is seeking. In early days, a simple assertion coupled with "no, I don't intend to connect to the ARPAnet" (this was long before RFC1918) was sufficient to get a nominal amount of address space. We tightened requirements and reviews in a successful effort to ensure orderly and predictable run-out of the free pool. Now that there is no free pool to protect, I have supported, and continue to support, relaxing the supporting documentation requirements.

**16. What do you believe to be ARIN's greatest challenges?**

Continuing to maintain our tradition of community-led, consensus-driven policies in the face of the evolving Internet Governance landscape.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

I have been doing my part to help improve the ARIN AC for eighteen years and am proud of my fellow members. A spirit of collegiality, mutual respect, and openmindedness pervades among people who hail from many different backgrounds, and the outcomes are as one would expect.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I've served on the ARIN AC for 18 years. Outside of ARIN, I've helped perform technical due diligence for M&A and new management teams. I've served on an FCC CSRIC working group to document approaches to improving the reliability of time and frequency transfer. Moreover, it turns out that a large part of the computer security industry is advisory in nature - providing information and recommendation to business leadership.

## **Alicia Trotman**

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

**2. Optionally provide one URL to a web page with biographical information.**

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations**

CaribNOG

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

Approximately 4 years experience on the ARIN Advisory Council. Conduct design work in telecommunication systems specifically for land mobile radio, APCO Project 25 radio systems, microwave, and radio over IP (RoIP) for Public and Life Safety. Coordinate public safety wireless needs assessments. Accountable for directing and managing project requirements for multiple clients simultaneously. Advanced expertise in Telecommunications regulations with specific focus on small island developing states. Skilled in developing policies and best practices to increase an organization's security consciousness.

### **PRINCIPAL AREAS OF INTEREST:**

Telecommunications Consulting

Spectrum Management

Internet Governance

Girls In ICT Development

IXP Development

Cyber Security Awareness

Cyber Bullying Awareness

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

No conflict of interest.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

I am eligible.

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

N/A

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

No limitations.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I have attended several ARIN meetings over the years. Both as an Advisory Council member and as a member of the community. What stands out in my mind is the transition ARIN was able to make during the Pandemic, the virtual meetings were engaging and effective.

Moving forward ARIN could consider adding a virtual meeting to its calendar yearly, in addition to its face to face meetings.

**10. How do you think ARIN's function, scale, or role should change?**

ARIN has made strides in investing in the education/training, research, capacity building for Information Communication Technology (ICT) development with the ARIN Community Grant Program which provides financial grants in support of operational and research projects. This initiative can be expanded by including grant funding for programs which targets closing the digital divide, as well as the gender digital divide, which were highlighted during the pandemic.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

I am always willing to listen and learn, which is essential in representing the community. My years of experience on the Advisory Council gives the advantage of knowing the procedures and culture and work ethic of the Advisory Council. In addition I bring a unique perspective from the Caribbean ICT landscape.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

I would ensure a continued commitment to integrity, unbiased and respectful engagement with the community.

**13. What areas of policy, if any, need more attention and why?**

An area which can be considered as low hanging fruit is the NRPM clean up, there are a substantial amount of editorial changes which serves to update, clarify and simplify language, within the document.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

As IPV4 space is becoming harder to acquire, bad actors find creative ways to acquire addresses. Legacy address holders should be on alert for highly profitable and unsolicited offers from brokers around the globe, in addition legacy address holders in the ARIN region should seek sign a LRSA ( Legacy Registration Services Agreement) with ARIN. Globally all legacy address holders should research their Regional Internet Registry policies.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

Needs-Based justification is a reasonable process for receipt of IP addresses, hoarding and artificial price inflation which can be a disadvantageous to some organizations is a valid concern.

**16. What do you believe to be ARIN's greatest challenges?**

ARIN overcame one of its greatest unforeseen challenges, which was continuing its operations and serving the community during the pandemic. Other challenges include maintaining an accurate and up-to-date WHOIS database, IPv4 to IPv6 transition especially in the Caribbean region.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

The ARIN AC has recently made significant advances by creating working groups in the following areas:

- Number Resource Policy Manual
- Policy Development Process
- Policy Experience Report

This initiative will assist with much needed language clarification and updates. There are no additional suggested improvements at this time, community input and transparency should continue to be included in this process.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I have served on the ARIN Advisory Council since January 2018, this coupled with my experience as a consultant and former regulator advising high level government officials prepares me for this role.



## Chris Woodfield

**1. Optionally provide one URL to a social media website of your choice, to foster dialogue with community members.**

<https://www.linkedin.com/in/cwoodfield/>

**2. Optionally provide one URL to a web page with biographical information.**

**3. Bearing in mind that you run and serve as an individual, rather than as representing an organization, please provide the name of any organizational affiliations.**

Twitter, Inc., NANOG

**4. Provide a brief CV highlighting experience relevant to the duties of the ARIN Advisory Council.**

I am a prior member of the ARIN Advisory Council, having served for four years from 2017 to 2020. During this time, I authored or co-authored seven policy proposals, of which four have been implemented into the NRPM after a successful PDP. I also served as the inaugural chair of the Policy Experience Report Working Group, from which several of the above policies originated.

I am currently a Senior Staff Network Engineer with Twitter (2011-2016, 2020-present), with a large part of my work focusing on IP allocation/addressing strategies.

From 2016 to 2020, I was a Principal Engineer at Salesforce.com, Inc., working primarily on integrations of cloud and on-premises network resources.

Prior to Twitter, I held senior engineering positions at Yahoo, Inc., and INAP (f/k/a Internap Network Services).

In addition, I currently serve on the NANOG Program Committee, primarily working on the NANOG Hackathon in addition to general PC duties. I initially joined the PC from 2016 to 2018, and was re-appointed in 2020.

**5. Please disclose any conflicts of interest you may have with doing your duty as a member of ARIN's Advisory Council. How do you propose to resolve such conflicts?**

I have no disqualifying conflicts of interest at this time.

My employer is an ARIN member, and is a net consumer of IP address resources, both allocated from ARIN and other RIRs directly, and acquired via the IPv4 transfer market. I intend to be mindful of potential conflicts of interest on ARIN policy matters, and abstain from decisions or votes that would disproportionately impact my employer's business activities.



That said, I do reserve the right to "take my AC hat off" and speak in support of policies where my employer's and the ARIN community's interests appear to be aligned. When doing so, I will disclose that I am speaking as a representative of an ARIN member organization, not as an AC member.

As a NANOG Program Committee member, I do not anticipate any conflicts of interest as NANOG does not actively engage in ARIN policy matters, beyond coordination of member meetings. That said, I intend to be mindful and recognize any that may arise in the future and similarly abstain from policy decisions/votes that could be compromised by such a conflict.

**6. Are you currently eligible to serve on the Advisory Council according to the Conflicts of Interest policy, i.e. you are not serving in a different ARIN-elected position than you are nominated for or are serving as ARIN representation to another outside organization?**

Yes

**7. If not currently eligible, describe how you will become eligible to serve, if elected (i.e. "If elected, I will resign from the position of \_\_\_\_\_ before 31 Dec 2021").**

n/a

**8. Describe any limitations on your ability to participate in Advisory Council and Public Policy Meetings or to serve the entirety of a three-year term.**

I have no current limitations on my ability to serve the entirety of a three-year term; if any were to arise during my service, I would disclose as soon as is practical.

**9. Have you attended ARIN meetings or otherwise participated in ARIN procedures in the past? What did you find the most rewarding from those meetings or procedures? What suggestions for improvement might you have?**

I have been attending ARIN meetings occasionally since the mid 2000s, and regularly since 2016, both as a representative of a member organization and as an AC member. I feel that the meetings are vital to ARIN's purpose of community service, and the resulting exchange of ideas between ARIN and the community, and among community members, drives forward ARIN's mission of service and stewardship to our members.

While ARIN has always supported remote participation, the Covid-19 pandemic and the forced move to 100% virtual meetings has taught us some valuable lessons as to the importance of enhancing the remote participation experience to enable a far wider range of participants than we've been able to support in the past. I fully support improvements to the remote participant experience and believe that this work will pay future dividends if continued.

**10. How do you think ARIN's function, scale, or role should change?**

I see several subtle, but substantial changes:

1. A number of IPv4-specific policies have changed and will continue to change as ARIN transitions from the role of a steward of unallocated IPv4 space to that of a de facto regulator of the regional IPv4 transfer market. The primary goal of that stewardship should be avoiding, where possible, the artificial scarcity of IP addresses on the transfer market, with a secondary goal of ensuring the integrity of the allocation database. Often these two goals can be in conflict; and as such, balancing the two will be a difficult problem to solve. I look forward to helping ARIN with that effort.
2. Over time, IPv4 specific policies will need to be unified as much as possible with IPv6 policy in order to simplify the NRPM, and IPv4-specific policies that are no longer relevant given the exhaustion of the free pool should be eliminated.
3. As recent history has shown, there is plenty of motivation for bad actors to attempt to profit from IPv4 scarcity in unethical and/or illegal ways. ARIN, as the clearinghouse for transfer transactions in our region, is in a unique position to scrutinize transfer activity, surfacing and acting decisively against fraud and abuse when discovered, and to continue to advise the AC on problematic policy language that allows for exploitable opportunities. I would like to see ARIN invest in increased analysis of market activity to ensure a fair transfer market for all community members.

**11. What differentiates you as a candidate or makes you uniquely suited to the post?**

I have a wide range of experience in the IP policy space, from multiple perspectives: In addition to my prior Advisory Council membership, I've been involved in IP administration for commercial ISPs and content providers. I've also been involved in multiple IPv6 migration initiatives, which gives me a unique perspective on the challenges of these migrations and perspectives on how ARIN can support members who are undertaking them.

**12. How do you separate your personal opinions from those of your organization and those of the community?**

If elected, I would make clear that I have a duty to the ARIN AC to work in an individual capacity, not as a representative of my employer. I would actively push back against any pressure to do otherwise where I believe that the interests of my employer do not align with my beliefs on ARIN policy. To be clear, this should not preclude my advocacy of policies that could be beneficial to my employer, as long as that advocacy is not driven or solicited by a conflicting interest. As an AC member, my primary duty is to the community, which is much larger than a single person, and to the policies, not the people behind them, despite potential personal conflicts.

**13. What areas of policy, if any, need more attention and why?**

During my prior term on the Advisory Council, I chaired a working group that focused on unaddressed issues surfaced in ARIN's Policy Experience Reports, and from this working group, a substantial number of policy proposals were produced to address a number of member pain points. I believe that the commissioning a dedicated working group on the topic was extremely beneficial to the community, even if the actual text changes of the resulting policies were rather technical. That said, I believe the AC can be even more proactive in this problem space, via outreach with both ARIN staff and community members to find other member experience issues that have the potential to be resolved in policy.

I also believe that given the continued, and increasing, scarcity of IPv4 resources, ARIN should further scrutinize the transfer market and proactively adjust policy as needed to prevent the opportunistic monetization of v4 resources in ways that do not serve the interests of the community. At the same time, we should do everything we can within reason to clear any roadblocks that customers may have to obtaining IPv6 resources in order to speed up v6 adoption, which could help to "cool off" the IPv4 transfer markets as operators' requirements for IPv4 resources are reduced.

**14. What are your thoughts on the rights and responsibilities of legacy IP address holders?**

I would expect that we continue to encourage legacy holders to sign LRSA agreements, to the extent that we are able; I think we should encourage larger legacy holders (or allow the transfer market to provide such encouragement) to find ways to use their space efficiently and redistribute unused portions. We're already seeing this from a number of legacy holders, which is excellent progress. At the same time, while ARIN has no influence on routing policy, we should be mindful of the potential impact of the transfer market, and the inevitable disaggregation resulting from transfers, on the size of the global routing table.

**15. What are your thoughts on needs-based justification for the receipt of IP addresses?**

We must strike a balance between responsibilities to ensure the stability of the transfer market. In particular, we must ensure that our policies discourage opportunistic market manipulation, while serving the community to ensure that organizations are able to acquire space as needed. This is a delicate balance that must be maintained, and it's apparent that various RIRs have taken substantially different approaches to this, leading to loopholes and potential market arbitrage. I believe that RIRs should have common policies, as much as is practical given differences in various regions' needs, and that we should continue to scrutinize the transfer market to eliminate unethical or illegal attempts at market manipulation. As we continue to see the IPv4 market heat up, the potential profits for bad actors will only increase, and ARIN must be in a position to detect and react when necessary.

**16. What do you believe to be ARIN's greatest challenges?**

I believe that the transition of ARIN's role in IPv4 allocations from steward of a held resource (i.e. allocating space from the free pools) to a registry of IPv4 transfers has something of an identity crisis among RIRs. RIRs are adopting divergent policies for transfers, creating loopholes and opportunities for arbitrage, which at some point should be reconciled.

The number of invalid/inaccurate records in the WHOIS database also represents a need for ARIN to adapt to increased scrutiny of these records. Both the network security community and law enforcement agencies have expressed the strong desire for ARIN to take a more active role in ensuring the accuracy of WHOIS. Law enforcement's interest, in particular, carries the implied threat of legislation to force the issue if we cannot resolve this issue independently.

**17. If you could improve any aspect of the ARIN AC, what would it be?**

During my prior term on the AC, smaller working groups were proposed and established to focus on specific aspects of ARIN policy and policy development, and once established, produced an impressive set of proposals that measurably improved the experience of ARIN members, both simplifying the NRPM

and clarifying a number of ambiguous sections of policy. While these working groups were informally organized, I believe that their benefit was sufficient to create a formal structure around them, possibly even creating separate policy tracks that member proposals and other feedback can be routed to in order to make these engagements more productive.

One aspect of the PDP that I feel could be improved is a formalization of engagements with policy authors through the PDP process - as is, while the PDP states that the AC *\*should\** include policy authors when possible in any draft revisions, I've felt that the AC taking over the editorial pen sometimes results in final language that don't properly capture the author's original intentions. As such, I would like to see the PDP formalize the proposal author's participation in the editorial process to prevent this in the future.

**18. The role of the Advisory Council is to advise the ARIN Board of Trustees on Internet number resource policy and related matters. Describe a similar experience you have had in such an advisory role.**

I have previously served on the ARIN Advisory Council, and as such am hoping to draw on this prior experience in continued service to the AC. I have also been a member of the NANOG Program Committee, which, while independently developing NANOG content, also advises the NANOG board and staff on many aspects of NANOG's goals and conference operations.

## NRO Number Council Candidates

### John Barfield

**URL to any one blog, social media account, or external website of your choice. (Optional)**

[www.bissinc.com](http://www.bissinc.com)

**Bearing in mind that you run and serve as an individual, rather than representing an organization, is there an organizational affiliation you'd like to state for identification purposes? (Optional)**

biss inc

**Are you available to serve the entirety of a three-year term?**

I am available for the 3 year term, yes.

**Describe any limitations on your ability to travel to attend ARIN and ICANN meetings in person or participate in scheduled teleconference calls.**

I would only need enough notice of travel dates for planning/scheduling purposes.

**The ASO AC holds monthly conference calls and participation is expected of all members. Would participation in these calls present any issue for you?**



Only if they're outside of typical US business hours. Other than that, no. I pretty much set my schedule as needed each week and have great flexibility.

**Why do you want to serve on the NRO NC, and what goals do you want to accomplish?**

I have been working with ARIN as a member and operating as an ISP for several years. I am a site-reliability engineer by trade, with experience in the full stack, however, I specialize in network engineering. I hope to learn and work along side the council in achieving the goals collectively decided upon for the good of the internet and our IPv4 as well as IPv6 numbering space. At this time, having no data from any prior conversations or discovery I cannot say that I have any more specific goals than the aforementioned.

**What, if any, conflicts of interest might arise for you as an NRO NC member? Specifically, do you serve in what could be perceived as any Internet governance roles, provide any services directly or indirectly to ARIN, or represent any significant interest from the community?**

I do not foresee any conflicts. From my business or employment.

**What is your record of serving the Internet community in the ARIN region?**

I am totally green to this aspect of the internet from a number resource planning perspective with any numbering authority, but I have been assisting like-minded engineers on numerous mailing lists, working with an on open source community delivered software for roughly 20 years. I have years of experience on the internet from my career tenure and experience as an independent operator providing internet, network management, hosting, VoIP, infrastructure, support, , engineering, professional services, etc. I think that I would be a good fit as an individual contributor to the team. I understand the need for ipv4 numbering governance, rpki technology, securing BGP from attackers, including would be nation state hackers. In the past I have also participated in some of the debate on arin discuss, which is a pretty quiet mailing list but when I've had the opportunity I have responded.

**What participation do you have within ICANN, in the past and currently? Are you a member of any other ICANN AC or SO?**

I have not interacted with ICANN in any employment or any other service capacity. I have only worked with ARIN to obtain IP and routing resources. My interaction on the public internet registries have always been with registrar providers such as GoDaddy.

**What differentiates you as a candidate, or makes you uniquely suited to serve on the NRO NC?**

I have 20 years of mostly technical experience but I also have business experience as well. As a member of the ARIN community I understand the hurdles that a company must go through to get allocations and I also understand managing those resources as conservatively as possible to prevent resource exhaustion. I am sure plenty of candidates are technically capable as well, but I provide unique solutions to businesses daily and have a deep understanding of how both corporations and consumers utilize the internet. I would go almost as far as to say that the internet has evolved to the point of surpassing electricity in terms of importance in the typical users mind. It is a critical service to manage properly, I was also getting emails regarding the nomination for the election to the council, I thought about the

opportunity and decided that I was interested in donating my knowledge to the cause. I was also interested during the last nomination but I wasn't ready to make the commitment at that time. I decided that I did not want to let the opportunity to volunteer to pass me by.

**Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the NRO NC, including names of organizations, positions held, specific duties, and dates of service.**

Dynata, Inc. - October 2020 - Present, Manager of Cloud Architecture (Previously Global SRE/Devops team manager)

Dynata is the largest market research company in the world, born from the merger of 2 large research organizations, Research Now!, and Survey Sampling International. The newly established Dynata went on a buying spree of multiple small market research startups as well as other competitors. I report to both the SVP of platform engineering (whom recruited me from the SRE team) and the CTO. My role is to lead our public cloud technology strategy and our internal organizational efforts for bringing the companies online research vision to life. I was allocated to the section of our company that generates roughly \$1b per year in annual sales revenue after several successful migrations led by my team. Such as our massive Nexus database migration (A SQL server database that costs us roughly \$1m annually in production alone to operate). I am responsible for a \$4.7m dollar annual cloud spend with AWS alone, and act as a direct mentor to technology directors over multiple products focused on respondent data, feasibility, and data quality operations for customers such as The Nielson Group, NBC, American Airlines, etc. I have successfully negotiated deep discounts from multiple vendors such as datadog, datastax, as well as managed and reviewed the implementation of our current EDP with Amazon. In Q1 of 2021 I was working on a multicloud strategy initiative directly with googles GCP service personnel, as a customer of our respondent data services, Google approached us to create a partnership, boasting a 30% savings over AWS for our container workloads. However, the engineering teams decided that we would not focus our energy on multi-cloud at this time until the remaining cloud native transformations were completed. I led an RFD process (A democratic opensource initiative) utilizing github for versioning and discussion tracking internally. This was an effort to mimic the Sun Microsystems "engineering first" business mindset, that made Sun products so viable and successful prior to being acquired by Oracle in 2010. I also led an initiative to build a hybrid on-prem container workload model utilizing Joyents Triton Datacenter, which would achieve roughly 50% savings over AWS but still allow the flexible provisioning automation and scaling that is achieved in the public cloud. Again while it has not been shelved, we as a business decided not to focus on that aspect of our infrastructure at this point, due to a large amount of applications which had not yet been migrated.

BISS Inc, Founder/CEO/CTO - September 2012 - Present:

Provide fully managed and delivered IT, network, internet, private-secure-cloud services, and telephony services to SMB's. BISS is a tiny company, at our peak we never had more than 3 employees. But we did have roughly 1500 end users. We did this strategically by signing up with ARIN, negotiating wholesale fiber from LEC's, and subsidizing the cost of the fiber by selling the over-subscribed internet and VoIP services to neighbors in multi tenant buildings, utilizing careful traffic engineering and cryptography to insure our SLA's and provide the committed services both effectively and efficiently. Our cloud operations operate entirely on used commodity hardware running Triton datacenter (From Joyent). I designed and built our infrastructure from the ground up, then went onto selling the services to our customer base and managing our costs and preparing sales agreements, collections, and managing our books. I have a large amount of web hosting experience from the years of supporting cloud hosting

operations for large enterprises during my tenure with CA Technologies, (2010-2015) and with multiple startups (including a now defunct search engine, firehost (now armor) and a few others (2005-2010). I am an expert at solving problems inexpensively without reinventing the wheel. I still own BISS but lost a large majority of our customer base when COVID hit and I chose to shutdown the end-user support side of our business and focus on our vertical startup InTeleGate which is an IoT only solutions provider. I negotiated wholesale carrier agreements with AT&T, T-Mobile, and Verizon and deployed an automated anycast network to our CPE gateways over an aggregated network fabric across all of the carriers. In other words I deployed a custom developed SDN and utilize our ARIN IP space as a result. I coined the term ISPoIP.

East Trinity Lodge #157 A.F.A.M

Chairman of board - June 2020 - June 2021

Board Member - June 2014 - June 2020

As a final note, I am a Freemason and a member of East Trinity Lodge #157 A.F.A.M. a constituent lodge of the Grand Lodge Of Texas. I just recently successfully completed my duly elected term as what the corporate world would consider the Chairman of the Board. Our fraternity is ancient, shrouded in internet rumor, and as is the case with many ancient customs, our titles and traditions are a bit different from modern organizations, I am considered a Past Master of the lodge, which means that I was the leader of our lodge efforts for the past 12 months. All of the language in Free Masonry is written in archeic old english and the meaning is not always interpreted in its original context. The master of the lodge is simply defined as the "respectful leader" in old English. Masonry in and of itself is an interesting non-profit fraternal organization 501-c10, and we provide roughly \$1m per day to communities around the world from our contributions to such organizations as the Scottish Rite Hospital and the Shriners hospitals for kids, as well as through our retirement centers, other programs focused on community outreach, and such programs as the fantastic teeth program, our annual scholarship donations to local high school students, and the "shoes for kids program". We run 4 annual blood drives to collect blood for the Scottish Rite hospital and most if not all of our community programs are dedicated to helping children, others in need in the community, our own fraternal members, as well as the widows, and orphans of past fraternal members who are no longer with us. I have been on the board, or what we call the officer line for 5 years, and am now free from the management aspect with the lodge, and am now only an active member in good standing. I am free and clear of all committee duties as well. If there are any questions regarding my work with our non-profit fraternity please feel free to ask. So many misconceptions exist about the history of freemasons and what we do behind closed doors that can be easily answered.

**Chris Quesada**

**URL to any one blog, social media account, or external website of your choice. (Optional)**

n/a

**Bearing in mind that you run and serve as an individual, rather than representing an organization, is there an organizational affiliation you'd like to state for identification purposes? (Optional)**



n/a

**Are you available to serve the entirety of a three-year term?**

Yes

**Describe any limitations on your ability to travel to attend ARIN and ICANN meetings in person or participate in scheduled teleconference calls.**

No limitations

**The ASO AC holds monthly conference calls and participation is expected of all members. Would participation in these calls present any issue for you?**

No Issue

**Why do you want to serve on the NRO NC, and what goals do you want to accomplish?**

To continue to uphold the mission of the NRO and to provide new perspectives.

**What, if any, conflicts of interest might arise for you as an NRO NC member? Specifically, do you serve in what could be perceived as any Internet governance roles, provide any services directly or indirectly to ARIN, or represent any significant interest from the community?**

No conflicts

**What is your record of serving the Internet community in the ARIN region?**

Formally I have held no positions within the community save a chair position of the Development Committee for NANOG from 2009-2011, and then only at the behest of community members. I have preferred instead working indirectly with members and the community in non-official supporting roles in one capacity or another since 2000.

**What participation do you have within ICANN, in the past and currently? Are you a member of any other ICANN AC or SO?**

None

**What differentiates you as a candidate, or makes you uniquely suited to serve on the NRO NC?**

I can bring a new perspective that can help position the NRO NC for the future.

**Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the NRO NC, including names of organizations, positions held, specific duties, and dates of service.**

Chris has over 20 years' experience of network engineering and supporting the community. He has worked at Cogent Communications, PAIX, Switch and Data, Time Warner Cable and Verisign and

supported capacity planning and number resources, peering and strategic infrastructure initiatives throughout his careers. From 2002-2006 supported 6Bone initiatives and the transition to v6 on the Switch and Data IXs (Formerly PAIX). From 2009-2011 served as Chair of NANOG Development Committee helping to transition the hosting of NANOG from Merritt to NewNOG. Chris has a bachelor's degree from George Mason University.