



2013 ARIN Elections Candidate Bios

Number Resource Organization Number Council (NRO NC)

Non DMR NANOG 59 and ARIN 32 Meeting Attendees:

Polls open 9am EDT, Monday 7 Oct - 5 pm EDT, Sunday 20 Oct

For DMRs:

Polls open 5pm EDT, Thursday 10 Oct - 5 pm EDT, Sunday 20 Oct

ARIN Board of Trustees and ARIN Advisory Council Voting:

Polls open 5pm EDT, Thursday 10 Oct - 5 pm EDT, Sunday 20 Oct

Cast Your Ballot at:

<http://teamarin.net/2013-elections/>

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2013
NRO Number Council

Devon Gayle



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://ewh.ieee.org/r3/jamaica
<i>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?</i>	I am currently a Vice President responsible for Information and Communication Technology at the National Water Commission in Jamaica.
<i>Are you available to serve the entirety of a 3-year term?</i>	Yes
<i>Describe any concerns or limitations on your ability to travel to attend ARIN and ICANN meetings in person.</i>	I do not foresee any limitations to travel to attend ARIN and ICANN meetings

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

I am a strong advocate for the advancement of technology for humanity. Therefore, serving on the NRO Number Council would provide me with an opportunity to bring passionate support and dedication in assisting with ensuring that the internet continue to grow and develop for the benefit of humanity globally. This goal I would be able to achieve while providing visibility and bringing focus to Jamaica and the Caribbean Region as a valuable member of the Global Internet Community.

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?

At this time I do foresee any conflicts of interest.

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

I have been an active member of the Institute of Electrical & Electronics Engineers (IEEE), Inc. and a member of the Jamaica Section leadership for many years, where we have actively supported the internet community in Jamaica and the USA. The IEEE Jamaica Section co-sponsored the ARIN Caribbean Sector Meeting on May 21, 2008 in Kingston, Jamaica and I made a presentation about IEEE at this meeting.

I have also held various offices as an IEEE Volunteer as outlined as follows.

- Chairman, IEEE Communication Society, Jamaica Chapter, 2009- Present
- Chairman, IEEE Region 3, Area 9, 2006-2008
- Chairman, IEEE Jamaica Section, 2002-2005
- Primary Delegate to IEEE Sections Congress 2002/2005
- Vice-Chairman, IEEE Jamaica Section, 2000-2001
- IEEE Professional Activities Council for Engineers (PACE) Chairman, Jamaica Section, 1997-2001.
- Secretary, IEEE Jamaica Section, 1998-1999.
- Treasurer, IEEE Jamaica Section, 1995-1998.
- Member; IEEE Communications Society.
- Member; IEEE Computer Society
- Member, IEEE Engineering Management Society.
- Member, IEEE Consumer Electronics Society.
- Member, IEEE Standards Association.

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

I am member of the IEEE Standards Association and I have been actively participating in the development of most of the recent IEEE 802.xx standards as a voting member. Therefore, I have been actively contributing to the development of the physical infrastructure which is critical and essential in the provision of access the internet resources.

In my previous role as Manager, Technical & Network Services I had direct responsibility for supporting the National Water Commission Computer Systems including the implementation of internet based system (web server, e-mail server, DNS, etc) and the security of these systems.

My professional experience spans close to twenty (20) years as an Information and Communication Technology practitioner. I have successfully transitioned through various specialist areas, and in each instance my performance has been exemplary. I am currently the Vice President, Information & Communication Technology (NWC) and I am the Chairman of the Institute of Electrical and Electronics Engineers (IEEE, Inc), Communication Society (Jamaica Chapter).

My exposure through the involvement with the IEEE, along with my professional experiences and formal training – specifically, qualifies me for this role and I know I will be able to make a meaningful contribution to the ARIN mission.

How do you propose to select an ICANN Board Member? Does there need to be any change in that selection process?

I would select an ICANN Board member by way of a nomination committee first short listing a set of nominees after which a selection committee review this list and come up with the successful candidate. Therefore, there needs to be a slight change to the current selection process to allow for a more robust two tier system.

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.

I have been an active member of the Institute of Electrical & Electronics Engineers (IEEE), Inc. and a member of the Jamaica Section leadership for many years, where we have actively supported the internet community in Jamaica and the USA. The IEEE Jamaica Section co-sponsored the ARIN Caribbean Sector Meeting on May 21, 2008 in Kingston, Jamaica and I made a presentation about IEEE at this meeting.

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- Member; IEEE Computer Society
- Member, IEEE Engineering Management Society.
- Member, IEEE Consumer Electronics Society.
- Member, IEEE Standards Association.

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My exposure through the involvement with the IEEE, along with my professional experiences and formal training – specifically, qualifies me for this role and I know I will be able to make a meaningful contribution to the ARIN mission.

In light of the ongoing transition from IPv4 to IPv6, do you have experience do you wish to share with the community that is noteworthy in terms of IPv6 adoption?

Despite the fact that I have not operated in the capacity as someone who has been a part of the transition from IPv4 in terms of IPv6 adoption; I am sufficiently seized of the possible issues driving this change and how critically important this change is in allowing the continued growth and development of the internet community.

What is your view of the existing bottom-up, self-governance model and structure of the Regional Internet Registry (RIR) system? Do you believe there are other models or structures that would work better?

My view is that the existing bottom-up self-governance model and structure of the Regional Internet Registry (RIR) system is a very effective way to allow the members of the internet community to have an active say in the running of these organisations at the local level. Therefore, at this time I think that this is the best model.

Jason Schiller



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://www.google.com/ipv6/statistics.html
<i>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?</i>	Google
<i>Are you available to serve the entirety of a 3-year term?</i>	Yes.
<i>Describe any concerns or limitations on your ability to travel to attend ARIN and ICANN meetings in person.</i>	None.

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

I would like to serve on the NRO NC because there are a number of global issues surrounding IPv4 depletion and IPv6 adoption, and I believe it is important that we resolve these issues before the Internet suffers a tragedy of the commons. As a network engineer for a large content provider, I will bring level headed operations and engineering mentality to the table in order to provide good policy which is in the best interest of the Internet as a whole.

At my core, I am an engineer and want to solve problems on their technical merit.

Some of the issues I would like to help resolve include:

As the ARIN free pool nears depletion, should ARIN allocate the smaller fragments that are left or will this overburden the routing system? What will be the impact of fragmentation of IP address markets on the routing system?

Post ARIN depletion, how should addresses be redistributed? Should the needs based system that the community has (up until now) deemed fair continue to be used? Does ARIN still have a stewardship role to play when they are no longer allocating or assigning IP number resources or is ARIN's stewardship role most important when IP addresses become scarce (or prohibitively expensive on the open market)? Will an open market tend to concentrate IPv4 address in large and wealthy organizations? Does the open market have a different kind of fairness? Will organizations that have a real need for IP addresses be the only ones willing to purchase them, especially when their value will eventually be zero once wide spread IPv6 adoption occurs? Will it concentrate IPv4 addresses in organizations that derive the most revenue per IP address? If it does is that fair to services that derive little or no revenue per IP address?

How can we encourage the adoption of IPv6? How can we set the right balance between routability (fragmentation) versus sustainability versus administrative ease? How can we continue to support current IPv4 functionality while scaling to meet all of these potential IPv6 addresses?

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?

None.

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

I have served on the NRO NC, which performs the role of the ASO AC over the last six years. In that time I have served on the ICANN ASO AC nominating committee, and worked to craft many interview questions. I served on all Global Policy Proposal Facilitator Teams to shepherd global policy proposals.

I attended all ARIN meetings since ARIN XV (April 2005). I continue to be active in ARIN policy discussions both at the microphone in public policy meetings, and in informal meetings. I read PPML and have posted on occasion. I have authored policies and assisted others in crafting their policy proposals, and have been among a team of originators on a draft global draft policy, and an ARIN policy proposal. I presented at ARIN XX (October 2007) on the Implications of Global IPv4/IPv6 Routing Table Growth.

Starting this year, I am happy to be involved with Google's web cast sponsorship.

I have attended and been a speaker at NANOG meetings since NANOG34 (May 2005). Below is a list of presentations I have given:

- Inter-AS Traffic Engineering Case Studies as Requirements for IPv6 Multi-homing Solutions
(How IPv4 BGP TE is currently used as suggested requirements for an IPv6 solution)
- Shim6: Network Operator Concerns
(What shim6 won't do that can currently be accomplished with IPv4 Multi-homing)
- IPv6 Panel: Time for the Transition or Just More GOSIP?
(Is IPv6 worth the trouble?)
- Open issues with ipv6 routing/multi-homing [with Vince Fuller]
(Why we need a multi-homing solution that is not shim6)
- PANEL:Pragmatismv6: a Grown-up, Critical Examination of IPv6
(Discussion of operators realistically deploying IPv6 in a manner consistent with IPv4 operational practices vs. standards developers who idealistically want to avoid de-aggregation)
- PANEL: TEOTWAWKI: The end of the world, as we know it
(Discussion of operators about how IPv4 depletion will impact business as usual)
- BGP 101 and BGP 102 classes.

I attended several IETF meetings since IETF 61 (November 2004). I was a member of the Routing and Addressing directorate (RADIR). I have also been involved in the idr, grow, ipv6, v6ops, mboned, and pim working groups. I have made presentations to the GROW working group and the routing and addressing workshop (RAW).

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

I have served on the NRO NC which performs the role of the ASO AC for the last six years. I have a wide breadth of experience.

I have worked on medium and large sized Enterprise LANs for American University, Georgetown University, and the Georgetown University Medical Center. I have worked on a medium sized WAN environment at the corporate headquarters of ManorCare, a managed care company, that had 230 remote nursing facilities. I have worked in the day to day operations and the longer term engineering departments of UUNET (Verizon Business / MCI / WorldCom), a large carrier grade ISP. I am currently working at Google, a large content services provider.

I have a strong technical background, a wide variety of end-site, ISP, and CDN experience, small and large network experience, as well as LAN and WAN environments. I am active in the industry, and have a degree in international relations and philosophy which makes me uniquely suited for this role.

How do you propose to select an ICANN Board Member? Does there need to be any change in that selection process.

The most critical issues with the ICANN Board selection process is the time line. The process is overly rigid. The nomination phase is 60 days or longer. The comment phase starts at the end of the nomination phase, must be at least 30 days long, and must conclude when the interview phase concludes. The interview phase starts 30 days after the comment phase began, and must be no longer than 60 days.

In this 60 day window (or less interview phase), two or three rounds of interviews will be held. First a written interview will be conducted, which the candidate will have 10 days to complete. An ASO AC meeting must then be held (regularly the first wednesday of the month) for the NRO NC to review the written interviews and determine which candidates to move forward to the next stage. Depending on how large the candidate pool is, the NRO NC can then choose to simply have one round of telephonic interviews, one round of in-person interviews, or both a telephonic interview to further reduce the candidate pool followed by an in-person interview. The candidates must then be contacted, and the subsequent interviews scheduled. The interview will be conducted by an Interview Committee (IC) which is a representative sub-set of the NRO NC. They will generate and present a report to the entire NRO NC, during an ASO AC meeting, who will further reduce the candidate pool. This process happens twice in the case of having both a telephonic interview and an in-person interview. All within 60 days.

The most important part of the ICANN selection process is getting good candidates in the nomination phase. I am proud to say that we have had a very good slate of candidates from the ARIN service region for seat 9 in my time on the NRO NC:

- 2012: Thomas Eric Brunner-Williams, Martin Levy, Bill Manning, Ray Plzak
- 2009: Jody Newman, Ray Plzak, Rajesh Chharia, Suzanne Woolf, Barry Shein
In both those years someone from the ARIN region has been selected, which required seat 10 to be filled by a non-ARIN region candidate.

The next most important part of the selection is to try ask tough questions. I typically try to ascertain what the NRO NC collectively thinks are the weaknesses or concerns they have with each of the candidates and craft questions that get to the point of those weaknesses or concerns. It is then up to the candidate to convince us that there should be no concern, or confirm our collective suspicion. I invested a lot of effort in 2009 and 2012 in this process, and have been told by other NRO NC members that it contributed greatly to the process.

I remain committed to finding good candidates from the ARIN region and investing

the time to craft and ask difficult questions. I have also begun a work on fixing our processes. I spearheaded an effort to revise our procedure to change our operating procedures to allow for eVoting when we could not get a 4/5ths majority to attend (never mind agree on) an ASO AC meeting. I have also significantly contributed to drafting a proposed procedure for ASO AC appointments to other positions. In the past, I have also contributed to revising the ASO AC's ICANN Board selection process to make it less rigid (a vast improvement, but much work is still required).

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.

I have been with Google for the past two years as a network engineer in the production network operations group. I have done everything from turning up new peering interconnects, provided oncall support to network operations, and using BGP based traffic engineering in order to mitigate hot peering points, to certifying and deploying new hardware, as well as designing and implementing a new network to deliver traffic from the Olympics to YouTube for live streaming.

In the past year, my primary focus has been on IP number administration, coming up to speed as the chief numberista, and cleaning up, simplifying, and implementing best practices for BGP policy.

Prior to Google, I was with UUNET (Verizon Business / MCI / WorldCom) for over 13 years. My job responsibilities ranged from customer facing High Speed Install of 56K frame relay to OC-3 links, completing maintenance on the network, serving as a point of escalation, to long term architecture and engineering projects such as integrating AS701 and AS19262 (completed while I was at Google), architecting and implementing 3 phases of IPv6 (GRE overlay, 6PE, and native), transforming the BGP architecture to reduce one level of hierarchy while not impacting the number of routes, paths, or forwarding decisions, LatAm (AS14551) architecture and implementation, UUCAST (AS704) phase 2 network architecture and implementation, setting and maintaining global routing policy standards.

Prior to UUNET I had combined three years experience in large scale LAN operations work at two universities, American University, and Georgetown University, and Georgetown University Medical center, as well as six months experience in a small scale WAN operations for ManorCare, a managed care company with 230 WAN connected remote nursing facilities.

In light of the ongoing transition from IPv4 to IPv6, do you have experience you wish to share with the community that is noteworthy in terms of IPv6 adoption?

I am proud to be responsible for UUNET (Verizon Business) offering a global IPv6 Launch just one week after the IANA depletion was announced. My effort included developing the IPv6 numbering plan, architecting and deploying IPv6 in the UUNET North America network in three phases, GRE overlay, 6PE, and native, and native IPv6 in Europe and Asia.

I am proud to work for Google, a company that has not only embraced IPv6 in a real way, but has made significant progress in pushing the wider community toward IPv6. Admittedly much of this was had been completed prior to joining Google. I continue to work closely with Lorenzo, Erik, and Mike Joseph to advance IPv6. As numbers administrator for Google, I ensure all products and services who have a need for IP number resources, either support IPv6 or have a plan to do so. Additionally, I require a well formed and well documented IPv6 numbering plan for each such product or service.

In customer outreach for UUNET, I have been insistent that the community needs to understand that the deadline to support IPv6 is not the day before their individual organization runs out, but rather the day the first organization runs out of IPv4 and is forced to make the difficult decision of offering an IPv6-only solution, degraded IPv4 over Carrier Grade NAT (CGN), reclaim low margin uses of IPv4 to be repurposed, stop growing, or purchasing IPv4 space on the open market. If most organizations deployed dual-stack, then when an individual organization depletes their available IPv4 addresses, they could simply transition to IPv6-only for new products, services, or customers.

I understand that there is real cost to deploying IPv6 whether it be equipment upgrades, recertification efforts, complexity of deploying new code and new configuration, or training. This comes with no new products, no new services, no new capabilities, nor new revenue. As such a deferral not only saves money, but allows your competitors to spend their time, and risk their network health to fix issues introduced with IPv6. The problem with this approach is deploying IPv6 for a large provider is a likely a two year process. In my mind it is a requirement for networks, products, and services that lack IPv6 support, to make at least a minimal investment to deploy and offer a limited IPv6 service for all products, services, and configurations to insure that each organization has a working IPv6 solution. It is recommended to turn on IPv6 for all parts of the network and all products and services, and then expand that support to all parts that are already IPv6 capable. Once complete, the organization needs to survey the cost and time required to complete upgrades to fully support IPv6 and budget their time and money to start such upgrades before organizations start running out of IPv4.

This does not seem to have happened, and it is unlikely that the gap between IPv4 and IPv6 will be quickly bridged when organizations begin to run out of IPv4 addresses. This means even for organizations that have embraced dual-stack, they will be forced to commit to either purchasing IPv4 addresses, forcing traffic to the legacy IPv4 Internet for through an expensive and poorer performing CGN, or not making the legacy IPv4 Internet available to their new customers. These are tough choices when trying to maintain market share against competitors who have not yet depleted their store of IPv4 addresses.

What is your view of the existing bottom-up, self-governance model and structure of the Regional Internet Registry (RIR) system? Do you believe there are other models or structures that would work better?

The current bottom-up, open, and transparent RIR system is working well. This governance model allows for fair and equal participation of all segments the RIR community. It allows operators and IP managers to create, develop and adopt number resource policies that are technically sound, and in the best interest of their customers, their network, and the borderless, global Internet as a whole.

I believe there is no better model.

I continue to argue that the NRO NC should take a more active role in shepherding global policy and improving global communication and coordination. It takes a long

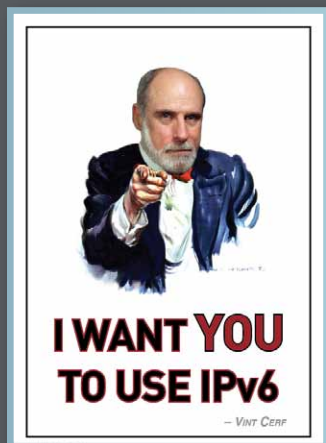
time for the same text to be discussed in person in each RIR's public policy meeting, modified, and agreed upon in all five regions. This is due to the timing of the meetings and lock-step nature of the global policy development process. Typically, global policy proposal text does not get modified until the results of a particular region's public policy meeting suggest there are objections or concerns that need to be addressed, this can be a lengthy process.

It may be possible to shorten this timeline by cross-pollinating ideas and concerns from each of the regions as the discussion unfolds in each region. The NRO NC could form a Global Policy Proposal Facilitator Team (GPPFT) which could act as shepherds by summarizing concerns and arguments within their own region, and bringing those ideas to other regions. GPPFT members could also spur along conversations in their own regional mailing lists even if a meeting is not pending. In this way it may be possible to front load the conversation, and determine and address objections without having to wait for all five regions to have an in person meeting to get common agreed upon text. This could maximize the possibility that a global policy proposal or a globally coordinated policy proposal would pass on the first round of in-person RIR meetings.



**2013
Board of Trustees**

Dr. Vinton (Vint) Cerf



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://www.google.com/ipv6/statistics.html
<i>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?</i>	Google
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	Google is a consumer of IP address space - if there are decisions concerning Google requests or proposals, I will recuse myself. I don't believe there are other obvious conflict potentials.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	I am based in London through end of the Calendar year 2013. I have a fairly heavy travel schedule but ARIN will be high priority.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Board of Trustees.

Co-inventor of the Internet, its architecture and the TCP/IP protocols. Served as chairman of the Board of ICANN from 2000-2007. Founded the predecessor of the Internet Architecture Board. A founder and first president of the Internet Society. Served at MCI from 1994-2005, during which time the MCI Internet backbone and NSFVBNS were developed by the teams reporting to me. Currently VP and Chief Internet Evangelist of Google. Chairman of the Board of StopBadWare (non-profit helping to clean infected websites). Presently serving a term on the ARIN Board.

What Internet-related services do you or your organization provide?

Google provides a broad range of products and services for Internet users: search, document composition and management in the cloud, Android and Chrome Operating systems (source code), Chrome browser (source code), YouTube video services, Chrome notebooks, Chromecast product (Internet video), Android-based tablets, Motorola mobile phones, HTC and many other manufacturers base their smart phones on Android. Large scale data analytic tools (Map/Reduce, BigTable and its successors, Google Earth, Google Maps, Google Books, Google Play, ...).

How do you foresee ARIN's function, scale, or role changing in the future?

Business models need to adapt to IPv6-only environments of the future; ARIN must deal with the transfer (and possible monetization) of legacy IPv4 address space. The treatment of IPv4 (or IPv6) address space as an asset in bankruptcy must not be allowed to abrogate ARIN's established rules for allocation of IP address space. Transfers into and out of region must be carefully orchestrated to avoid potential abuse. RPKI or something similar is needed to defend against address space hijacking. As the "internet of things" hits, ARIN may have many more transactions to cope with despite the assignment of large chunks of IPv6 address space.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

I believe that RFC2050 is still the best formulation of considerations for IP address management. As the transition from purely IPv4 to mixed IPv4/IPv6 operation continues, the best practices of address management may need to be adapted (hence consideration of RFC 2050bis). RFC2050 has served the community extremely well and forms the basis for community-based practices. Consideration of policy during the transition from IPv4 to the mixed IPv4/IPv6 environment is vital. Generally, I believe the principles that underlie thoughtful allocation of IP address space, taking into consideration impact on routing table size and efficient use of the address space, are well-expressed in RFC2050 and still applicable today. The need for adjustments seems inevitable as IPv6 usage grows.

What would broaden participation in the ARIN public policy development process?

Increased participation of private sector and public sector users of IP address space of all kinds through outreach, presence of more accessible, broadband internet, mobile device use of Internet and IP address space, along with automobiles, set top boxes, etc.

What is ARIN's role, if any, in promoting IPv6 adoption?

It has a key role to draw attention to the importance and utility of IPv6 usage, the side effects (e.g. NATS) of failure to adopt. It needs to reassure consumers of IP address space that ARIN policies are bottom-up, private-sector friendly, responsive to government needs.

What are ARIN's greatest challenges and how do you see ARIN addressing them?

Shifting business models to deal with increasing use of IPv6 and eventual abandonment of IPv4 (if that ever happens). Exercise of its bottom-up policy development is the key to transparent development of acceptable policies for IPv6, legacy IPv4, coping with the trend towards monetization of IPv4 address space. The legal community is largely unaware of the IP layer of the Internet and policies for managing these spaces - there is a lot of work to do to help this community reach sensible conclusions in the presence of parties interested in monetizing IPv4 address space.

What is the appropriate scope for ARIN's organizational activities and responsibilities?

ARIN should stay focused on the basic problem of developing regional and global policy for IP address allocation and assignment, supporting policy development through its bottom-up processes, educating public, government and private sectors as needed about the use of Internet address space and the rules for its allocation. ARIN should be receptive to interactions with the NRO and its RIR members, with the Internet Society, with ICANN and other elements of the Internet Governance ecosystem. This includes participation in the Internet Governance Forum, the International Telecommunication Union and other bodies with interest in Internet Governance (justified or not).

What is your position on the multi-stakeholder Internet governance?

I believe this is the only sensible way to deal with policy for this global, loosely-coupled, highly distributed system. Parties affected by policies adopted by the component institutions of the Internet ecosystem must have seats at the table.

David Huberman



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?

Microsoft Corporation

What conflicts, real or perceived, might arise should you be elected to the Board?

The only conflict that would arise were I to be elected to ARIN's Board would be any formal request for services Microsoft might make to ARIN. To remediate that conflict, I would recuse myself from all tickets between Microsoft and ARIN.

Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.

No limitations whatsoever. I enjoy the full support of the Microsoft Corporation for any and all time and travel required of an active Board member.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Board of Trustees.

I've worked in the backbone engineering industry for 14 years, most of which has been spent at ARIN. I served ARIN as a senior analyst in 1999 and 2000, then again from 2003 to 2013, ending my tenure there as a Principal. Today I am part of Vijay Gill's AS8075 at Microsoft Corporation, where I am developing and running a program to fully integrate native IPv6 inter-connectivity across all services and devices.

The most important thing you can know about my experiences is that while I was paid as an ARIN staffer for many years (and am thus intimately familiar with everything-ARIN), ARIN is a huge part of who I am. It is a company I care deeply about, and the role it performs in the backbone engineering world is of paramount importance. ARIN was never just a job for me. It was something I was, and am uncommonly passionate about.

In turn, I am running for a Board seat because my love of ARIN is so deep that I wish to continue being part of ARIN in a meaningful way. I want to be part of ARIN's future and help shape its direction in 2014 and beyond. The best way I know how to do this is as a member of the Board.

What Internet-related services do you or your organization provide?

Microsoft Corporation is one of the largest providers of internet services and devices in the world. Microsoft's portfolio includes Bing, Skype, XBOX Live, Windows Live, Windows Azure, and numerous other internet-related products.

How do you foresee ARIN's function, scale, or role changing in the future?

ARIN's role and scale both need to change significantly in the near-term future:

1) IPv4 is near exhaustion at ARIN. As a result, ARIN's role needs to be more focused on two major efforts:

- effective stewardship of a burgeoning transfer market; and
- a laser-like focus on customer service and tools.

2) ARIN has devoted a lot of operational budget on outreach activities over the last 13 years. These efforts have been laudable and measurably successful. Absent further guidance from the ARIN community, however, ARIN needs to rehone its budget to other priorities.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

RFC2050 is obsolete. Operational reality is markedly different than the time during which RFC2050 was authored.

RFC2050bis is an interesting document which takes a very different approach than RFC2050. Instead of a lot of prescriptive text about "how to run a registry", the document is more concerned with Internet Governance and very basic principles of the Registry. I support the principles of RFC2050bis whole-heartedly, and believe it is an excellent replacement for RFC2050

What would broaden participation in the ARIN public policy development process?

There are two strong changes ARIN could make to broaden participation in the policy development process:

1) ARIN needs to stop having stand-alone meetings, and better engage and align with the NANOG community.

2) The ARIN PPML mailing list needs to be deprecated, and integrated fully into NANOG-L. This would have a few benefits. It would ensure policy discussions would have the widest possible technically-capable audience watching and participating. It would significantly improve the signal:noise ratio because it wouldn't be the same 10 people talking to each other year after year. PPML is too dominated by a small number of participants, and that needs to change for the ARIN policy development process to improve.

What is ARIN's role, if any, in promoting IPv6 adoption?

ARIN has completed its mission in the promotion of IPv6 adoption, I think. ARIN spent a lot of time and money executing myriad efforts to inform every community it could find that IPv4 was depleting and that it was necessary to immediately begin efforts to start dual stacking networks.

There is no more effort necessary, in my opinion, and ARIN should re-focus its budget accordingly.

What are ARIN's greatest challenges and how do you see ARIN addressing them?

ARIN's greatest challenge is the pending ARIN-exhaustion of IPv4 and the effects this will have on the role of the organization. To address this major change in focus, ARIN needs to make two important steps:

1) ARIN needs to focus on providing stewardship over the transfer market, and ensuring that internal processes and procedures are streamlined to make the customer experience relatively painless. This will require changes in not only how ARIN approaches staffing and customer service, but also changes in NRPM. It requires leadership from ARIN and its board to prompt changes in NRPM that are business-rational. To evolve from an IPv4-focused registry to a proper and respected steward of a modern transfer market will require a real spirit of teamwork between ARIN's Board, AC, staff, and the policy making community.

2) ARIN needs to have a laser-like focus on exactly what services customers use each and every day, and what services they value. Once that's identified, ARIN needs to budget accordingly, and the staff must work quickly towards providing these services using modern software and technology.

What is the appropriate scope for ARIN's organizational activities and responsibilities?

ARIN is a numbers registry, and no more. Unless the membership and the policy making community decide otherwise, the appropriate scope for ARIN should be limited to:

- registering numbers uniquely
- providing rock-solid technical services like Whois, reverse DNS, and RPKI
- participating in the NRO and supporting its goals to the extent the operating budget allows

What is your position on the multi-stakeholder Internet governance?

In short: it is one the greatest things about the evolution of the internet, and ARIN should always ensure it is part of that process, and never working against it.

Bernadette Lewis



<p><i>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?</i></p>	<p>Caribbean Telecommunications Union</p>
<p><i>What conflicts, real or perceived, might arise should you be elected to the Board?</i></p>	<p>ARIN and the CTU are signatories to a Cooperation Agreement. ARIN supports the CTU's work financially and this may be a challenge should I be elected. However, I believe that this could be overcome by my recusing myself from any discussions or decisions regarding the ongoing relationship between the ARIN and the CTU.</p>
<p><i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i></p>	<p>I do not perceive any limitations to my ability to attend the Board and Public Policy Meetings.</p>

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Board of Trustees.

In August 2003, I was appointed as the Secretary General of the Caribbean Telecommunications Union (CTU). My early work was dedicated to revitalising the organisation and transforming it into a multi-stakeholder, relevant and vibrant ICT organization and putting it at the forefront of regional activities to harmonise policies and practices for the development of the Caribbean ICT sector.

In 2005, under my direction, the Caribbean achieved a worldwide first by initiating a regional, multi-stakeholder Internet Governance Forum (IGF). The Caribbean IGF has since met annually, with one of its major achievements being the promulgation of a Caribbean Internet Governance Policy Framework. The CTU has successfully implemented many of the policies in the Framework, one of the more significant being the proliferation of Internet Exchange Points (IXPs) in the Caribbean.

The issues pertaining internet governance, IPv4 imminent exhaust, IPv6, IXPs and other Internet related matters have been the subject of Caribbean Ministerial ICT Strategic Seminars which I initiated with a view to explaining the evolving Internet ecosystem and promoting greater understanding amongst Caribbean Government Ministers. These Seminars have equipped senior government officials with the necessary information to act decisively on a number of IG projects.

As a strong proponent for ICT-enabled Caribbean development, I continue to advocate the use of ICTs through an initiative called the Caribbean ICT Roadshow. The Roadshow Initiative, started in 2009, is designed to raise awareness and educate on the how ICTs and the Internet in particular may be effectively employed to enhance every sphere of endeavour. The Initiative targets all sectors of society from the youth, to budding entrepreneurs to government departments, the business community and civil society. It has been held with great success 20 times in 17 countries that it has thus far visited, 3 countries having already held two Roadshows.

I believe that development of ICTs and the Internet is a collective responsibility. Therefore, since 2005, the CTU has worked in strategic partnerships with many Internet-related organisations. Of particular importance is the CTU's partnership with ARIN, with which it has a co-operation agreement. The two organisations have come together effectively to further the growth and effective use of the Internet and its resources in the Caribbean.

In 2012, the Latin American and Caribbean Internet Registry's (LACNIC) conferred on me an Outstanding Achievement Award for my efforts towards developing the Internet in the region.

What Internet-related services do you or your organization provide?

The CTU has been actively raising awareness and educating regional stakeholders on issues relating to the development and use of the Internet and its resources. The CTU has jointly hosted and participated in Internet policy fora with ARIN and regularly convenes capacity building programmes on Internet topics. These activities have contributed significantly to raising awareness, education and building the expertise of many stakeholders on Internet matters.

The CTU hosts an annual Caribbean Internet Governance Forum and spearheads the implementation of the policies of the Caribbean Internet Governance Policy Framework. The CTU has been educating on, promoting and actively supporting the proliferation of Caribbean Internet Exchange Points (IXPs). The establishment of the 6 IXPs in the region is as a direct result of the CTU's work

The CTU also produces documents designed to educate its stakeholders on internet issues. Some of the more recent works include a Caribbean Handbook on IPv6, a White Paper on IXPs, and a Caribbean Cyber Security Policy Framework, all of which have contributed significantly to introducing and explaining the subjects in the context of the Caribbean experience.

Through its strategic partnerships with many Internet organisations, including ARIN, the CTU has been able to extend its influence bringing to the attention of Caribbean stakeholders the role and work of such organisations and encouraging participation in their activities.

Because of its work in the region, the CTU has become the preferred source for information on the Internet and consistently provides advice on Internet-related issues to its members and wider community of Caribbean stakeholders.

How do you foresee ARIN's function, scale, or role changing in the future?

Number resource management will be the core of ARIN's function in the foreseeable future. However, the need exists to engage the wider community of Internet users in the ARIN Region and to recognise that issues that are of concern to Canada and the

United States are not necessarily those of concern to the sovereign states and countries that comprise the “Caribbean and North Atlantic islands”.

The usual participants in ARIN’s activities are a small fraction of the users of Internet resources. In my view, it is incumbent on ARIN to focus on engaging non-traditional stakeholders such as Governments and private sector organisations, not only on the subject of ARIN’s role and work but also on issues such as IPv6 adoption, cyber-security and internet governance.

It is imperative that growing emphasis be placed on protecting privacy, cyber-security and supporting law enforcement agencies in the ARIN region in combatting cyber-crime.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

RFC 2050 describes the mechanism for the distribution of globally unique Internet address space and the operations of registries for a time pre-dating the current environment of Regional Internet Registries, IP address-intensive applications, ubiquity of mobile and other IP-based devices and increasing IPv6 adoption. The necessary review and update of the guidelines to reflect the current and evolving environment has presented some clear challenges one of which is the apparent omission of certain principles in the revised document, 2050bis.

I believe that the overarching guiding principles of RFC 2050 namely those of conservation, routability and registration are still relevant and necessary and have been reflected in the the goals of RFC 2015bis, perhaps not as concisely and explicitly as stated in RFC 2050. I think the community must decide whether the principles are adequately expressed in the revision and if not, they should be reflected in ARIN’s number resource policies.

What would broaden participation in the ARIN public policy development process?

The level of participation in ARIN public policy development process is a function of the insight and understanding of the inner working of the Internet and evolving Internet issues. The people who currently participate are very knowledgeable on these matters. The very technical nature of discussions at the fora can therefore be daunting and prove to be a disincentive to participation. I believe this could be overcome in part, if ARIN’s meetings were segmented in a manner that builds capacity of the less knowledgeable to enable greater understanding of the issues and thereby encourage participation.

Alternatively, outreach programmes to enable meaningful participation should be undertaken. These programs should be designed to educate and raise the level of understanding of non-traditional stakeholders, such as governments, regulators, enterprises and technically inclined young people. The subject matter and language must be tailored to be comprehensible to different audiences. These engagements should be in the context of what is important to the stakeholders and how ARIN’s work and support are important and of benefit to them.

Finally, ARIN needs to enhance its visibility and to the wider community of Internet users in its Region. If stakeholders are not aware of ARIN’s existence, they cannot participate.

What is ARIN’s role, if any, in promoting IPv6 adoption?

As a registry for Internet number resources, ARIN should be at the forefront of educating and raising awareness of IPv6 and the need for IPv6 adoption. The community of Internet users must be made aware and prepared for the inevitable exhaust of IPv4 addresses.

What are ARIN’s greatest challenges and how do you see ARIN addressing them?

Rapid technological innovation is a challenge for many Internet-related organisation and in ARIN’s case, may render existing policies obsolete. The effects may be mitigated by a more formal approach to researching emerging technology trends, determining the potential impact on current practices and proactively making appropriate policy recommendations.

The growing issues pertaining to cyber-crime would also necessitate insight into the changing environment and positioning of the organisation to respond appropriately by proving support to law-enforcement agencies.

Another challenge for ARIN would be the growth of a grey Market for IPv4 addresses outside of ARIN’s purview, with the potential to compromise network security and stability of the Internet. ARIN must therefore engage in education on the issues; promote and actively support widespread adoption of IPv6 .

What is the appropriate scope for ARIN’s organizational activities and responsibilities?

There is a need for formalising a series of training programmes designed to building capacity to enable stakeholders to participate more fully in ARIN’s activities. A starting point for the design of the programme should entail a survey to determine the current level of understanding of the participants.

As part of its outreach, ARIN should develop strategic partnerships with regional and international organisations with compatible goals. This approach would provide access to a wider group of stakeholders; raise ARIN’s visibility in the region; and provide opportunities for advancing ARIN’s work, capacity building activities and cross fertilisation of ideas.

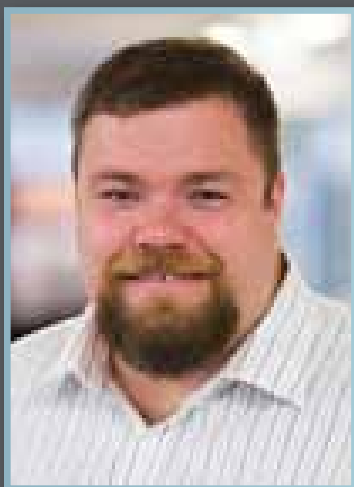
A systematic research programme should also be added to ARIN’s organisational activities.

What is your position on the multi-stakeholder Internet governance?

As indicated earlier, I wholeheartedly support multi-stakeholder engagement. All of the CTU’s work is based on multi-stakeholder participation, involving diverse parties. We have found that such engagement, appropriately structured, yields better solutions and outcomes, to which all stakeholders are able commit and support.

The CTU’s seminal work in developing a harmonised Caribbean Spectrum Management Policy was formulated on the basis of multi-stakeholder participation and the Caribbean Internet Governance Forum is also based on multi-stakeholder engagement. The CTU’s work in these and other areas has been very productive and successful as a result.

Bill Sandiford



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://www.billsandiford.com/
<i>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?</i>	Telnet Communications
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	I am aware of no conflicts, real or perceived, that might arise should I be elected to the ARIN Board of Trustees. Like many other trustees and candidates, organizations that I represent use number resources received from ARIN.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	I am aware of no limitations on my ability to attend Board or Public Policy Meetings in person or to serve the entirety of a 3-year term.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Board of Trustees.

I am the President and CTO of Telnet Communications, a growing CLEC and ISP operating in the Greater Toronto Area of Canada. I have over 17 years of experience in the ISP and telecommunications business with expertise not only in technology but also regulatory and business processes. In my current role, responsibilities include the design, deployment, and operation of all aspects of Telnet's network and overseeing Telnet's application development and professional services departments.

I have extensive group governance experience. Currently I serve as President and Chairman of the Board of the Canadian Network Operators Consortium (CNOC), a trade association for network operators and service providers in Canada. I also serve on the Board of Directors for the Canadian Internet Registration Authority (CIRA) a member-driven organization that manages Canada's .CA domain name registry, develops and implements policies that support Canada's Internet community, and represents the .CA registry internationally. In addition, I serve on the board of the newly formed AlbertaIX, an organization that is in the process of founding an Internet exchange in Alberta. I am a former member of the board of the Toronto Internet Exchange and I have 4 years of experience as a valued member of the ARIN Advisory Council.

I have spent my entire career working for Telnet Communications since I co-founded the company in 1995 after attending Laurentian University in Sudbury, Canada. I am a recent graduate of a program offered by the University of Toronto's Rotman School of Management that provides specialized training for directors of Not-for-Profit organizations like ARIN.

Outside of work I enjoy hockey, rugby, scuba diving, and piloting my Cessna aircraft to exotic destinations around North America and the Caribbean.

What Internet-related services do you or your organization provide?

Telnet Communications has been in the ISP business since 1995. Services provided include dial-up and broadband internet, website hosting, and data services. Since 2007 Telnet Communications has been recognized by the CRTC in Canada as a CLEC providing VoIP services as well as legacy telecommunication and Hosted PBX services.

How do you foresee ARIN's function, scale, or role changing in the future?

It is difficult to predict how ARIN's function, scale or role will change as we continue to move towards IPv6 and a post-IPv4 world. One thing that is clear is that changes will be forthcoming. For example, the current desire being expressed by the ITU to be more involved in IP resource numbering could influence or cause these changes. ARIN will need to work hard to continue its role as an effective steward of number resources.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

I am a strong believer of the principles outlined in RFC 2050 and RFC 2050bis.

RFC 2050 served the community well for almost 17 years since its creation in 1996, but some changes were badly needed. RFC 2050bis adequately addresses the needed changes and is a useful successor and replacement for RFC 2050.

What would broaden participation in the ARIN public policy development process?

The public policy development process would likely see more participation if the process was simplified. Some aspects of the process are simple, however as a policy gets deeper into the process it becomes more complicated. Recent changes to the PDP have made the process slightly better, but much work is still needed in this area. The remote participation at public policy meetings has been helpful in broadening participation. Finding ways to enhance the remote participation experience would likely be successful at increasing participation levels.

What is ARIN's role, if any, in promoting IPv6 adoption?

ARIN should continue the proactive approach that it has taken in recent years with regards to IPv6 adoption. Events such as the "ARIN on the Road" series have been, and continue to be, wildly successful vehicles for educating the community and stakeholders on the importance of IPv6 adoption. ARIN should continue, and perhaps enhance, its participation in industry tradeshows and events to continue promoting the importance of IPv6. These events have also been a great opportunity for members of the community that are generally unable to attend public policy meetings to liaise with and ask questions of ARIN staff and others in the community.

What are ARIN's greatest challenges and how do you see ARIN addressing them?

Some of ARIN's greatest challenges include IPv6 Adoption, the Internet Governance model, and member engagement.

As answered in the previous question, ARIN should continue the proactive approach it has taken with regards to IPv6 adoption with events such as the "ARIN on the Road" series and continued outreach in the community.

ARIN needs to continue to be a leader in Internet Governance. Continued involvement in the various Internet Governance fora is necessary to cement ARIN's position on important topics as directed by its members.

Over the years, ARIN has seen its levels of member engagement come and go. Some progress has been made in this area with things like remote participation at meetings and ARIN's outreach programs, however more work is needed in this regard.

What is the appropriate scope for ARIN's organizational activities and responsibilities?

I believe that the appropriate scope of ARIN's organizational activities and responsibilities are adequately defined in the seventh article of ARIN's Articles of Incorporation and subsequent amendments.

In particular, ARIN's responsibility to manage the allocation and registration of Internet resources, to manage and help conserve scarce resources, and educate and increase the knowledge of the general public and Internet community are some of ARIN's most important responsibilities. Consistent with the articles, the scope of these activities should be national and international.

What is your position on the multi-stakeholder Internet governance?

I am a strong supporter of the multi-stakeholder model of Internet governance. I believe that it is an important tool to ensure that all stakeholders can be heard and their issues adequately addressed in the process. Other proposed models of Internet governance would be less effective in this regard.



**2013
Advisory Council**

Cathy Aronson



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	
<i>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?</i>	Daydream Imagery LLC
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	I have no conflicts.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	I have no limitations. As far as I know I will be able to attend the meetings and complete my entire 3-year term.
<i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i>	I can commit to this as long as it's not on one particular weekend in January. As far as I know the meeting is no longer during that time.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

I have been doing routing and addressing since 1988 when I worked on the NSFNet network. I worked to deploy Classless InterDomain Routing (CIDR) when we were running out of class B blocks and exploding the routing table because of not being able to aggregate blocks of class Cs.

At @Home network, one of the very first to do internet over cable, my group was responsible for all the routing and addressing. While at @Home I negotiated the policy for cable providers to get blocks of IPv4 address space from ARIN and that policy is still in use today. I have been on the ARIN Advisory Council since 1998 and have actively served the community in that role. More recently I worked at Cascadeo Corporation doing network engineering and network management for a number of clients. In this role I worked with enterprises and became familiar with the needs of those businesses.

Describe the relevance of your experience to the Advisory Council.

I have been on the Advisory Council almost since the beginning. I know why things are the way they are because I was there. I believe that this institutional knowledge is important as we try to make policy for IPv6 and work our way through exhaustion of IPv4. I also served a term on the first ASO Address Council and worked with other regions on the globally coordinated IPv6 policy. I have been a customer of ARIN as well as RIPE and APNIC so I have experienced the policies first hand. All of this work is directly related to the work of the advisory council and the ARIN community.

What Internet-related services do you or your organization provide?

Prior to April 2013 I was working for a company who provided NOC and engineering services for a number of enterprises. We also managed a nation-wide backbone for another client. This afforded me the ability to become more familiar with the needs of enterprise customers.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

I believe I am different because I have been in the industry for a long time. I have gotten address space from ARIN, RIPE and APNIC. Before I was on the AC I was already active in those communities. I have also been active in IETF and NANOG. I know the issues this community faces.

How do you foresee ARIN's function, scale, or role changing in the future?

ARIN's function and scale will change as we transition to IPv6. In theory organizations won't be coming back to the registry as often to get IP addresses. I do feel that there is a huge role for ARIN in IPv6 policy though. There are so many unforeseen obstacles with an address space so large. We are starting to see that with drafts being written by organizations deploying IPv6. I think there are a lot of things that we haven't thought enough about. Things like maybe it really matters if we assign thousands of addresses for a point-to-point link. As a community we have to look at these issues and make solid policies and recommendations to help.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

RFC 2050 is the bedrock that the registry system is based upon. I believe that it has served us well and that we need to carry those principles forward into the future. I do feel that RFC2050bis is also required because the landscape has changed since 2050 was written. I am co-shepherd of a draft that tries to add back some things that are not in 2050bis. Specifically the concepts of stewardship and conservation. I am not entirely sure if the new proposal will gain consensus but it's an excellent discussion for our community to have.

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

I believe that we are going to be faced with a stream of IPv4 policies dealing with the end of IPv4. I feel that some of the policies are going to have to change for the transfer market and we are seeing that already. Some policies don't make sense post-depletion. An example is making small ISPs return blocks to get bigger ones. This makes no sense in an IPv4 market and so we had to change it. I believe there will be more of that sort of policy change. Further I believe that IPv6 policy will need enhancement as we get more experience with IPv6 and the issues with such a large address space. IPv6 is not infinite and so we have to practice stewardship and make reasonable policies.

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

It is always a balance separating personal opinions from those of the community and my employer. I listen to the community and have always worked hard to help gain consensus and move forward policies that community wants and needs. I believe if you look at my record on the AC you will see that I work hard for the community and often vote for policies based solely on community need, community consensus, and technical soundness.

Owen Delong



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://tunnelbroker.net
<i>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?</i>	Hurricane Electric
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	I am not aware of any COI concerns with my candidacy or my service on the AC at this time.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	I am not aware of any limitations at this time.
<i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i>	Yes

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

I am an incumbent member of the Advisory Council nearing the end of my second term on the council. In that time (and the time before I joined the council), I have contributed significantly to the policy development process and authored many successful policies and engaged the community in many vital discussions around ARIN policies. I believe that my work on the council is far from complete and I hope that the ARIN membership will allow me to continue in that work. I am an IPv6 evangelist at Hurricane Electric. That role allows me to engage with the community far more often in the process of supporting and promoting IPv6 adoption in the real world.

Describe the relevance of your experience to the Advisory Council.

I have a lot of experience as a network engineer in a variety of operational roles ranging from very small businesses and SOHO operations up to and including very large ISPs. I have a tremendous amount of experience with IPv4 dating back to days when we did not have NAT in IPv4 and I now also have several years of experience with IPv6. I teach IPv6 courses and help others to deploy and understand IPv6 on a regular basis. My broad understanding and association with many different subgroups in the ARIN community allows me to better understand the diversity in the community and try to shape policies that are fair and designed to benefit the broadest possible range of the community.

What Internet-related services do you or your organization provide?

Hurricane Electric is an ISP in the ARIN region as well as Europe and Asia. We provide colocation, web hosting, and backbone internet access services. We have an aggressively open peering policy and we are present at many exchange points around the world. We also operate the largest IPv6 tunnelbroker service.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

As I stated above, I have a great range of experience among many of the various constituencies within the ARIN community. This combination of experiences provides me with unique understanding of the policy environment and policy changes may affect the community overall as well as specific groups.

How do you foresee ARIN's function, scale, or role changing in the future?

I believe ARIN will likely become more engaged with regulatory and governmental processes around internet governance. I believe that as we transition to IPv6, ARIN's staffing needs and management processes will need to adapt significantly. The good news is that the ARIN board and management have already seen this coming and have put what I believe are good plans in place to deal with those changes.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

I generally support the principles outlined in RFC2050. I believe that 2050bis drops most of them, but what little is retained is good.

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

I believe we should solve some of the deadly embrace issues for startup organizations in current IPv4 policy. Especially for LIR/ISP organizations. As much as I would like to say that we could/should use policy to drive IPv6 adoption, I don't believe that there is much that can be done through policy to create the necessary motivations for greater IPv6 deployment. All we can do is remove as many of the hurdles as possible. I think we have done most of what can be done in this regard.

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

I have been doing this throughout my time on the AC. On several occasions, my duties on the AC have required that I vote according to what I believe is in the best interests of the community or what has the consent of the community though I disagreed with the chosen direction. I have no trouble distinguishing my personal opinions from those of my organization or those of the community.

Andrew Dul



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://www.ipaddressnews.com
<i>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?</i>	8 Continents Networks LLC
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	I am not aware of any current or anticipated conflicts if I am elected to the AC.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	No currently known limitations.
<i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i>	Yes, I plan on attending and am not aware of any current conflicts.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

Career Experience:

8 Continents Networks LLC: 2010 - present

Cascadeo Corporation: 2010 - 2013

Perkins Coie: 2007 - 2009

Boeing Company (Connexion by Boeing): 2003 - 2007

Internap Network Services: 1998 - 2002

Sacramento County Office of Education: 1996 - 1998

Internet Community Activities:

NANOG member: 2011 - present

ARIN region participant: 1999 - present

Education:

Masters in Business Administration - Seattle University

Bachelors of Science, Electrical Engineering - University of California, Davis

Describe the relevance of your experience to the Advisory Council.

I have been active in the ARIN region since 1999 and have attended ARIN meetings since 2000. I also served the region on the ARIN advisory council from 2002-2005. I have authored a number of policies that have been adopted by ARIN and I am the original author of the multiple discrete networks policy.

What Internet-related services do you or your organization provide?

I currently am independently employed providing Internet network and systems consulting.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

I have been active in the ARIN community for more that 10 years and have track record of active participation within the RIR community.

In 2011, I researched and presented a paper discussing the economic factors that are helping and hurting IPv6 adoption. Generally, IPv6 suffers from a lack of economic incentives to push deployment. IPv4 run-out, however, has the ability to change the economic equation and encourage IPv6 adoption. This paper was presented October 2011 at the joint ARIN - NANOG meeting in Philadelphia. <http://www.ipaddressnews.com/2011/10/17/16> This presentation and paper has spurred a number of other works focusing on the economic and business aspects of IPv6 adoption. I believe this increased discussion of these economic and business factors is important to understanding how network migrations will occur and how various decisions within the Internet community can have positive or negative effects on the transition to IPv6.

How do you foresee ARIN's function, scale, or role changing in the future?

ARIN's role in the Internet community will change as the Internet continues to evolve. As a member and community driven organization ARIN's role in the future should change as the community directs ARIN to change. The movement toward an all IPv6 network will likely lessen the workload of ARIN. I support ARIN's current efforts within the Internet governance forums and believe that its role there may increase as necessary to support the further growth and evolution of the Internet as a global communications platform.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

I support the updating of RFC2050. This document while describing the RIR system when it was authored in 1996 it does not today accurately reflect the current RIR principles and structure. I support the adoption of RIR principles into the NRP and support the current draft of policy proposal 2013-4. I also believe there is value in creating similar proposals in other RIR regions.

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

With the exhaustion of the IPv4 free pool expected in late 2013 or 2014 the transfer market will become more important to members of the Internet community. The current policies will likely need to be changed to better facilitate IPv4 transfers to organizations which need IPv4 addresses to continue to operate their businesses and upgrade their networks to support native IPv6.

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

The Internet community is a complex set of stakeholders with often overlapping or conflicting goals. Personal opinions will influence anyone's decision making process, but I believe that role of an AC member is to work for all members of the Internet community. My goal as an AC member will be to weigh the input of all stakeholders and attempt to craft the best possible policy.

Jesse Geddis



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://www.linkedin.com/in/sgeine/
<i>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?</i>	LA Broadband
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	I do not have any conflicts with this nomination.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	I have no limitations.
<i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i>	I can commit to attending in person.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

I am a Network Architect and Business owner that got my start in the Wild West days of the Internet before ARIN came into being. My dream was always to build my own carrier network. I finally realized this goal in 2006 and now serve tens of thousands of residents with native IPv6. Starting a business is a struggle and over 80% of ARIN's membership is made up of folks like me. I want to give back and I am here to represent you with objectivity and passion. I am very active in the community and on the mailing lists with policy and outreach. I've noticed most of the sitting Advisory Council is non-participatory in community discussions. I think it's important to have folks who have the time and dedication to serve.

Describe the relevance of your experience to the Advisory Council.

I have worked at all levels in business from Tech Support to building and owning a local carrier from nothing. I have worked in healthcare, movie studios, enterprise, and carriers serving millions of customers. This has given me a broad understanding of what many of the members go through when taking on network and business projects that are affected by ARIN. I am here to help. My goal is to listen to the membership, do my best to translate feedback into policy proposals for further feedback, then serve as your advocate for those policies to the board. After listening and engaging with the community regarding the new fee schedule I have already submitted a proposal for an equitable overhaul of the current fee structure.

What Internet-related services do you or your organization provide?

LA Broadband LLC operates in three areas:

1. We serve as a provider offering managed transport/transit to enterprises and large residential complexes.
2. We supplement engineering staff in the enterprise and carrier sectors in design and deployments.
3. We are a large Juniper Partner that sell Juniper routers, switches, fabrics, and firewalls. We are one of only a few Juniper resellers to have sold and implemented a full qfabric system.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

I view my role as your objective advocate with ARIN's board.

I am both a Network Architect with 15 years of experience and a successful business owner. Having both perspectives has given me the ability to look at policy and problems and see the financial, administrative, and technical aspects of it while offering solutions that address all three. I have waded into numerous heated debates on ARIN's lists and have led coalitions of members to come up with policies to address the issues raised. As a business owner I am acutely aware of the challenges we face via process, policy, and fees in starting and growing a business. As an engineer I am also acutely of the technical challenges policy creates. I hope my unique background, leadership abilities, and new ideas can be of service to this community.

How do you foresee ARIN's function, scale, or role changing in the future?

My expectation is that ARIN will get extremely busy as we hit the IPv4 wall before things taper off some with the widespread adoption of IPv6. This will be a difficult and possibly unpredictable time over the next few years for ARIN, the members, and internet users in general. I think with consistent and easy to follow policies we can support the community at large make this difficult transition.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

I think the principles are solid, however, I think we have strayed some on the topic of "Conservation". Especially with IPv4. Organizations stockpiling address space is commonplace these days and will become more so as the IP market place goes into full swing and IP's are traded as a commodity. Further, today, over 80% of ARIN's addresses are held by just 60 organizations. I'm not sure this is what the framers had in mind when the policies and procedures that guide us today were created so long ago.

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

There are several but the two that generate the most heated debate in the community are the “nibble” policy and the fee schedule for ISP’s.

Specifically, the “nibble” policy for ISP allocations has proven to be a serious barrier to entry for businesses. They have to first pay exorbitant fees for an allocation from a large provider (who pays virtually nothing for the allocation they’re reassigning) before they can petition ARIN for their own assignment. This is a very long and costly process to start a business. I would like to work with the community to come up with a way to make ARIN policy neutral in this regard.

The annual fees for ISP’s also could use some adjusting. ARIN currently has a proportionately extremely low flat rate for everyone greater than a /12 (who use over 80% of the IPv4 resources) while everyone below pay over 80% of ARIN’s revenue yet only consume a tiny percentage of the resources. Fees should be more evenly spread across the allocations and in proportion to their consumption. They also serve, inadvertently, as a barrier to entry for Small Businesses.

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

Again, I view my role as your advocate in policy and fees with ARIN’s Board. My goals in accepting this nomination are threefold:

1. I am committed to helping increase IPv6 adoption by advising good Policy, Fees, and Outreach.
2. I want to advocate for more business neutral ARIN policies.
3. I want to advocate for more business neutral fee schedules.

Scott Leibrand



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	http://www.linkedin.com/in/scottleibrand
<i>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?</i>	Limelight Networks
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	No such conflicts have arisen to date, and I do not expect any. If anything does come up, I am very aware of the need to recuse myself from anything that might be (perceived to be) a conflict.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	I do not anticipate any limitations. My attendance record has been near-perfect (even for teleconferences), and I intend to keep it that way.
<i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i>	I have attended every workshop to date, even when it meant sitting in the Seattle airport for 7 hours until they could finally get our plane out after a rare ice storm.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

I have served two terms on the Advisory Council, initially while working at Internap, and throughout my time at Limelight. In addition to many other duties at both companies, I have been an active participant in peering and interconnection fora, and an active member of NANOG.

Describe the relevance of your experience to the Advisory Council.

My most relevant experience to the Advisory Council is my last 6 years of serving on the Advisory Council. :) During that timeframe, I have worked closely with most of the ARIN community to discuss, develop, and debate policy ideas and proposals.

What Internet-related services do you or your organization provide?

Limelight Networks (<http://www.limelight.com/>) is the #1 provider of Digital Presence management, providing content delivery and cloud-based services over the world's leading video content delivery network.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

In my last 6 years on the AC, I believe I have proven myself a good facilitator of community consensus, a strong advocate for what is right, and am not afraid to take on responsibilities to make sure the AC gets done whatever needs to be done. My record should speak for itself: if you don't think I'm exceptionally well qualified for another term on the AC, I suspect there will once again be a number of strong candidates who I will also be supporting for election to the AC.

How do you foresee ARIN's function, scale, or role changing in the future?

I believe ARIN will need to become a smaller organization and reduce overhead costs once we begin to transition away from IPv4. During the transition, I believe ARIN needs to simplify and streamline policy to be better suited to an empty IPv4 free pool, and to enable organizations with continued need for IPv4 addresses to be able to acquire them without unnecessary constraint.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

I believe that RFC2050bis does a good job of accurately describing the principles guiding RIR operation. I have yet to see a good argument that any still-relevant principles in RFC2050 are missing from 2050bis.

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

I believe the primary area that currently needs continued policy work is simplification of IPv4 policy, and a redefinition of "justified need" to reflect the realities of a transfer market, as distinct from the situation where all allocations and assignments came from the ARIN free pool.

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

I am quite comfortable making the distinction between whether I personally support an idea or proposal, and whether the community supports it. I also have been a consistent advocate for giving the community full opportunity to discuss proposals, even when I think they are a bad idea as written.

Tina Morris



<i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i>	
<i>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?</i>	Bright House Networks
<i>What conflicts, real or perceived, might arise should you be elected to the Board?</i>	I work for a large ISP; therefore, there may be a perception that I would show favoritism towards big business ISPs. However, I am actually more concerned with good Internet citizenship regardless of the size of the resources involved. I also believe that there is great value in considering all levels of users when developing policies. Policies should be developed in a way that does not hinder everyday business growth and expansion but also allows for innovation and new business development whenever possible.
<i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i>	There are no limitations preventing my attendance. I currently attend all scheduled meetings of ARIN as a member and enjoy participating in the process.
<i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i>	Yes, I can commit to these scheduled meeting dates. No concerns at this time.

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

I have been in the network world for my entire adult career, and have been active with IP management for the last 10 years via the cable industry. I managed internal network IP resources as a Network Engineer with Time Warner Cable for 6 years until I transferred and promoted from Network Engineering into a strategy and resource management role for Bright House Networks, current title - Principal Network Engineer – IP Strategy. I now manage all Public and Private IPv4 and IPv6 IP resources for Bright House Networks, I make all IP requests to ARIN on behalf of my company and I make all internal grants to the teams for both special projects and growth. In my role at Bright House, I participate in the ARIN community; I attend all public policy meetings and follow the PPML discussions.

Describe the relevance of your experience to the Advisory Council.

My experience is relevant to the Advisory Council because real world networks and routing must be considered when making some policy decisions. Also I have experience as an end user who understands the effort involved in making IP requests, distributing IP space, reclaiming and renumber IP ranges as well as, achieving and documenting proper IP utilization. I believe that policy needs to be vetted by actual users to ensure that it is effective, and to ensure that we are not over complicating the processes, thereby making compliance even more difficult.

What Internet-related services do you or your organization provide?

Bright House Networks provides Cable Television, Data, Voice, Home Automation and Security to a variety of customers, both residential and commercial. In addition Bright House also provides Cell backhaul services for several mobile carriers.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

My role at Bright House Networks includes granting IPv4 and IPv6 assignments to various and diverse teams for customer growth, expansion and special projects. Within my company we have a large spectrum of users and the ranges that use vary enormously in size and type of use, for example: Commercial, Residential, Static, DHCP, Voice, Managed Solutions, and Cellular Back Haul, just to name a few. I understand the complexity and strategy involved in moving, tracking, and planning the use of a large amount IP space in many different scenarios. I believe that this experience adds a unique perspective to the discussion, and I would be an asset to the Advisory Council.

How do you foresee ARIN's function, scale, or role changing in the future?

Although ARIN's role may change with the depletion of IPv4, and the deployment of IPv6 I believe there is still a lot of work to be done and ARIN's role will continue to be significant.

Regarding IPv4, even when IPv4 space has effectively run out for all larger users there will still be some micro allocations available for assignment. In addition the transfer market will become increasingly busy. ARIN will be responsible for approving these transfers and assuring that resources are assigned properly so that all parties get use of the resources for which they have negotiated. In addition the maintenance of all current IPv4 resources will continue to be a priority task.

ARIN will obviously have a significant presence in the world of IPv6. As much as we all wish we could flip a switch and IPv6 would be instantly embraced and fully deployed by all organizations, vendors, and users, in truth IPv6 is still in its infancy in

many ways and we have a long way to go before it becomes the standard we know it must become. We have tried to apply lessons learned from IPv4 in policy, deployment and assignment strategy to prevent future issues. However, some problems cannot be discovered and corrected until real world scenarios occur. I believe we will see more and more policy discussion in regards to IPv6 as usage increases and assignments and policies are put to use in the real world.

The changing world of IP brings more challenges to ARIN in the future as their roles and responsibilities shift with the community they support.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

RFC2050bis is a more simplified and modern version of RFC 2050 – however it drops the concepts of stewardship, ARIN 2013-4 attempts to integrate the missing concepts at the RIR level by defining Registration, Conservation, Routability, and Stewardship. I am in support of both the simplification found in RFC2050bis and the integration of 2013-4 into the RIR policy. However it is clear via PPML that this requires further discussion before moving forward.

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

I am in support of the effort to clear up the LIR/ISP and End-user Definitions; this area has proven difficult for many users to clearly define their service and to request adequate resources for their business model. In addition fees should match the end users actual use of the Resources received from ARIN.

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

I believe that personal opinions are always separate from those of your organization and community although you are certainly influenced by those around you. I try to be open-minded and listen to all discussion before forming my opinion. I especially enjoy the public policy meetings because there are often perspectives presented that I may not have considered but yet are very valid and have sometimes completely changed my vote on a policy.

Milton Mueller



<p><i>Optionally provide one URL to any one blog, social media, or external website of your choice.</i></p>	<p>http://faculty.ischool.syr.edu/mueller/Home.html</p>
<p><i>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?</i></p>	<p>Syracuse University School of Information Studies</p>
<p><i>What conflicts, real or perceived, might arise should you be elected to the Board?</i></p>	<p>I don't think so. My status as an academic researcher gives me an unusual degree of independence from business-related conflicts of interest. IGP was originally supported by the Ford Foundation and since then has been supported primarily by research grants from the National Science Foundation. My main interest is in correctly analyzing the effects of policies and in understanding how governance institutions actually work - including what makes them perform well or poorly. Other than the 3-year XS4All Chair, which is finished, I have not been affiliated with any Internet service provider. Occasionally we have asked Internet companies for small donations to support academic conferences, blogging or student projects. The sums involved are small and the positions taken by the academic researchers are unrelated to the support. Syracuse University requires researchers every year to fill out conflict of interest forms revealing whether they have any economic interests in companies that might be affected by their research outcomes.</p>
<p><i>Describe any limitations on your ability to attend Board and Public Policy Meetings in person or to serve the entirety of a 3-year term.</i></p>	<p>As an academic I have a relatively flexible schedule, bounded by teaching commitments. In my first year of service I attended both in-person ARIN meetings (Barbados and will attend Phoenix), missing only the AC orientation in January as it fell on the first week of classes. I attended all but two of the AC's monthly teleconferences and shepherded one proposal that involved additional email consultations and a teleconference. My attendance record is at the median or slightly above relative to other AC members.</p>
<p><i>The AC meets every year on a Friday in January, in Reston, VA for a workshop to review AC practices and policies. Can you commit to attending in person, and does that pose any conflict or concern?</i></p>	<p>It depends on the Friday, and on my teaching schedule. If it is early January the answer is almost certainly yes. If it is later in the month and I teach a Friday class, I would probably have to miss it again.</p>

Provide a brief biography of recent experience, associations, and affiliations relevant to serving on the Advisory Council.

I am Professor in the School of Information Studies at Syracuse University, where I directed the Masters of Science program in Telecommunications and Network Management from 1998 to 2007. From 2008-2010 I held a Chair on the Privacy and Security of Internet users endowed by the Dutch Internet Service Provider, XS4All. I am also the Director of the Internet Governance Project, where since 2004 we have monitored Internet governance institutions and applied research and scholarship to current Internet policy issues. I served on the Advisory Council of Public Interest Registry (.org) for many years. I have played a significant role in the formation of ICANN and in its policy development processes. I was a founder of the Noncommercial Users Constituency (NCUC) in ICANN's Generic Names Supporting Organization (GNSO) and have served as its chair. I am currently on the Executive Committee of ICANN's Noncommercial Stakeholders Group. I have been elected to the GNSO Council twice and have chaired a working group that developed policy for the divestiture of the .org domain in 2002-3. I have also served and made significant contributions to ICANN working groups on Whois-privacy and vertical integration of registries and registrars. I have attended a few RIR meetings and have been an active participant on the policy lists of RIPE and ARIN.

Describe the relevance of your experience to the Advisory Council.

My professional experience has brought me into contact with nearly all of the relevant actors shaping Internet resource policies, from high-level government officials to small-scale ISPs, to large telecom firms to civil society digital rights advocates. I understand the basic policy choices facing the Internet community at the global level, and must explain them in depth to college students. My research has required me to look at those issues more critically and independently, taking nothing for granted and being willing to challenge entrenched worldviews. I also have now one term of service on the Advisory Council so I have an idea how it works and what is involved.

What Internet-related services do you or your organization provide?

My employer is a University and provides educational services. Our School pioneered online degree delivery in 1992 and, with the migration of more of the classroom and course administration to online platforms, these educational services might be called an Internet-related service. Of course, Syracuse University provides extensive broadband internet services to its students and faculty and holds a legacy address block or two. As a program director and teacher in the Telecommunications and Network Management program, I have often interacted with the networking technicians in the Information Technology Services department - but am not part of ITS itself.

What differentiates you as a candidate, or makes you uniquely suitable to the post?

I represent a different point of view on some of the key issues. I am skeptical of centralized power, deeply familiar with the entire picture of Internet governance (ranging from IP addressing to domain names to federal cybersecurity initiatives) and seek to preserve the autonomy and freedom of Internet users and suppliers across all those domains. I am also an independent voice and while I am capable of working in groups to achieve common goals, I also refuse to be intimidated by behind-the-scenes pressure or disagreements from other AC and Board members. I have a principled mission and am not in this to attend meetings for free in exotic places or to make friends and network for my own advancement. Whether you agree with me or not, I have a rare combination of expertise that synthesizes policy and economics with technical knowledge of Internet addressing and routing. My research and publications have investigated many of the economic and technical issues related to the IPv4 - IPv6 migration, the emergence of IPv4 markets, RPKI, the policies that might be applied to IP address Whois, and the relationship between governments and private-sector internet institutions.

How do you foresee ARIN's function, scale, or role changing in the future?

IPv4 depletion will push all RIRs, not just ARIN, to make significant changes in their functions, and roles. I realize, however, that the AC is in no position to initiate or direct those changes. The economic forces created by IPv4 scarcity and IPv6 migration, as well as cybersecurity concerns and the rising power of national governments over the internet, all need to be dealt with creatively. I think ARIN needs to adjust certain attitudes and practices in order to open a viable path to the future. Some people fear these changes but it would be useful to have an advocate of change, someone who embraces rather than resists challenges, on the AC.

What is your opinion of the principles outlined in RFCs 2050 and 2050bis?

The word "principles" does not appear in RFC 2050. RFC 2050 refers to itself as a description of "the IP assignment policies currently used by the Regional Registries to implement the guidelines developed by the IANA". In other words, it was IANA that articulated what it called "guidelines" (in effect, broader principles) and RFC 2050 tried to translate those principles into policies. RFC 2050 bis is an attempt to update RFC 2050, in recognition of the fact that the situation in 2012-3 is very different from that of 1996-7. Interestingly, RFC 2050 bis also does not use the word "principles" but instead sets forth "goals." There is some consistency in the basic goals and policies of both documents: both, for example, emphasize the need for unique registration, aggregation, and conservation. However, in updating 2050, there is a danger that ideologues may try to freeze in place policies that need to change by elevating them to the status of a principle. I would recommend avoiding a debate on "principles" and focusing instead on finding the proper policies in a pragmatic way.

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

(Left blank by candidate)

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

This issue did not really come up during my first year on the AC, although there were some interesting debates about the interpretation of levels of opposition or support on the PPML list. It is clear that AC members may be prone to unconsciously distorting their notion of how much support a proposal has based on their own view of its desirability.

Separating my opinions from my employer will be easy - my employer has virtually no interest in IP addressing issues. As for the community, it is not homogeneous but contains a very diverse set of views. When all the groups agree or are near agreement, then it is easy to make the separation. When, as is more often the case, there are factions putting forward different views, then one must take account of the way the positions advocated serve or harm the interests of various actors. One must assess whether objections are reasonable and raise public interest issues, or simply self-serving and obstructionist. My approach in cases of disagreement within the community would be to throw out my own 'favorite' policy while also discounting views from the community that, in my opinion, were obviously wrong or self-seeking. Working within those parameters, I would look for solutions that resolve the conflicts while promoting the smooth and stable functioning of addressing and routing. Basically, it is a matter of avoiding favoritism and seeking just but efficient proposals. I have experience doing this from ICANN working groups and Council.