Open Source Voting System
Technical Advisory Committee Applicants

1. Larry Bafundo
2. Nick Grabenstein
3. Carl Hage
4. Roan Kattouw
5. Sanny Lin
6. Jared Luxenberg
7. Alex Rattray
8. Tyler Sax
9. Jim Soper
10. Tony Wasserman

1. Larry Bafundo

Copied below and attached are my application materials for the SF Voting System Technology Advisory Committee (TAC).

Please contact me with any questions.

Thanks,

Larry

--

Larry Bafundo

████████████████

I would like to join the Technical Advisory Committee (TAC) because the citizens of San Francisco deserve a modern, transparent, and secure voting system. I believe that I can offer the committee a unique perspective based on my experiences working with IDEO to design a new voting system for Los Angeles County and my current role at 18F, where I work with federal agencies like the Federal Bureau of Investigation (FBI) to modernize their digital services.

In reviewing Section 3 of the Bylaws, I have experience in the following categories:

- **User experience** - As a product manager at 18F I work with cross-functional teams of engineers and designers to develop new digital solutions that help agencies better serve their constituents. In doing so we employ an agile and human-centered approach to product design, where solutions emerge through user feedback and experimentation, rather than from requirements. Over the last year and a half I've led several projects at 18F that range from discovery, prototyping, to production builds, and am now working with the FBI to deliver a service that makes national, state, and local crime data accessible via a modern web interface and an open API. Prior to my time at 18F, I worked as a subcontractor to IDEO on the LA County Project, during which our team served as technical stewards to the design process and developed the reference system architecture that will guide subsequent phases of the project.
- **Project management** - Over the last 4-5 years of my career I've served as a scrum master, strategy consultant, and product manager for high-profile digital initiatives across the public and private sectors. In each of these roles I've had to draw on best practices in stakeholder management, program design, risk management, and project reporting. You can view some examples of how I approach project management by viewing this repo for 18F's Crime Data Explorer Project with the FBI here: documentation. In addition to these experiences I have CSM (certified scrum master) and PMP (project management professional) certifications.

Aside from my experiences working on the LA County Voting Project, I would offer a perspective that advocates for the users of the new system (the voters) and ensures that the solution evolves in a way that takes into account people, processes, and technology. This is important, because while San Francisco may not have the same needs for user-centered design as Los Angeles, technology alone cannot be the driving force behind system design as it will ultimately need to serve real people.

An open source voting system provides several advantages: increased transparency, tighter feedback loops with experts and the general public, components that may be reused elsewhere, and less reliance on external vendors for future system design and maintenance.

As stewards for the project the TAC should facilitate debate on key issues that may affect system design - such as how to strike the right balance between security and accessibility - and help explain these concepts so that voters understand the key constraints affecting the design process. In this way, the TAC can serve as a conduit between academia/experts and the general public. The TAC will also need to consider how San Francisco should approach components of new system that were not addressed by the LA County Project, or which are unique to San Francisco - such as how ranked choice voting affects ballot design and how a tally system should work.

Yes, I agree with the Bylaws.

References:

Matt Adams, Portfolio Director & Project Lead for the LA County Voting Project, IDEO: ███████████

Dave McGivney, Practice Lead, Client Architecture Solutions, Digital Foundry: ███████████

Larry Bafundo (MBA, PMP, CSM)

████████████████████████████████

SUMMARY:

Civic technologist with broad experience delivering solutions across the public and private sectors. Currently leading a project at 18F with the Federal Bureau of Investigation (FBI) to bring greater transparency to U.S. crime data. Prior to joining government, I helped design an open source voting system for Los Angeles and advised private sector clients on the development of new digital products and strategies.

EXPERIENCE:

18F, General Services Administration (GSA)   San Francisco, CA
Product Manager   November, 2015 – Present
18F is a consultancy inside the federal government that helps agencies build and buy new digital services. As a product manger, I work with agency partners and cross-functional teams to deliver solutions at all stages of the product lifecycle.

- Leading a 9-person team to design and build a new website called the "Crime Data Explorer" (CDE). The CDE will support the FBI's broader efforts to modernize crime reporting and bring greater transparency to national, state, and local crime trends. Due to its scale and visibility, the project is serving as a template for the adoption of agile and user-centered design principles at the FBI.
- Received a "special action award" for managing a high-risk project related to the DATA Act, a federal initiative aimed at harmonizing data standards and systems across government. Worked with the Office of Management and Budget (OMB) to develop a prototype that explores how a centralized reporting tool can reduce contractor burden and simplify reporting requirements. Due to the success of the engagement the contractor community is now building a production-version of the prototype.
- Led a discovery effort with the Consumer Financial Protection Bureau (CFPB) to explore open source solutions for streamlining federal procurement. Conducted workshops with senior leaders at CFPB to align perspectives and identify opportunity areas and iterated with users to shape potential solutions. Delivered wireframes and a report of findings that describe the key characteristics of a minimum viable product (MVP) for streamlining procurement and provide a roadmap for broader modernization.
- Created educational materials that explain 18F's design approach for both technical and non-technical audiences. Due to the accessibility of these materials, they are frequently used by peers in presentations to clients and in the development of new scopes of work.

Digital Foundry   Tiburon, CA
Strategy Consultant   August, 2012 – October, 2015
Digital Foundry is a consultancy that delivers custom software solutions. Past clients include the City of Los Angeles, Volkswagen, JP Morgan Chase, Target, and Activision. Highlighted experiences include:

- Led a 16-month engagement with officials from the City of Los Angeles and designers from IDEO to design the nation's first publically owned and open source voting system. Digital Foundry served as technical advisors for the project and designed the software system architecture that will inform implementation.

Larry Bafundo (MBA, PMP, CSM)

████████████████████████████████

- Led a 6-month project with a major retailer to assess its mobile web experience prior to the holiday shopping season. Presented findings and opportunity areas to senior leaders and served as an "agile coach" to stand-up new agile teams in support of these recommendations.
- Led ideation workshops across the automotive, education, and banking industries to explore new product ideas and to jumpstart development projects. Delivered creative briefs, roadmaps, and digital prototypes in support of these initiatives.
- Served as an agile project manager/scrum master for a variety of custom software development projects.

National Association of Chemical Distributors (NACD)   Arlington, VA
Strategic Partnerships Manager   August, 2009 – August, 2010
NACD is a trade association that represents chemical distributors and their supply-chain partners.

- Engaged chemical industry executives from around the country to join NACD based on the value of the association's network and it's ability to advocate on behalf of its members to Congress. Recruited the most new members in 10 years.

Society of Chemical Manufacturers (SOCMA)   Washington, DC
Business Development Manager   November, 2006-August, 2009
SOCMA is a trade association that represents specialty chemical manufacturers.

- Managed the development of an industry networking website that connected chemical companies with skilled workers in their area. Grew the site's user base by promoting it at industry events and incorporating user feedback into the product roadmap.

The European Institute   Washington, DC
Senior Program Manager   November, 2005 – November, 2006
The Institute is a non-partisan policy group focused on promoting U.S.-EU cooperation on transatlantic issues.

- Organized forums with US-EU policy makers on a range of technology and defense topics.

Potomac Institute, Center for Terrorism Studies   Arlington, VA
Research Analyst   August, 2004 – November, 2005
The Potomac Institute is a think tank focused on technology policy and terrorism studies

- Reported on the structure of terrorist organizations and the insurgency in Iraq.

EDUCATION:

MBA – University of San Francisco, School of Management   May, 2010 – May, 2012
- Founding member of the USF Consulting Club

BA, International Relations – The Catholic University of America   May, 1999 – May 2004

CERTIFICATIONS:

- **Certified Scrum Master (CSM) –** November, 2014
- **Project Management Professional (PMP)** – August, 2012

████████████████████████████████

VOLUNTEERING:

Code for America – San Francisco Brigade   May, 2014 – Present
- Mentor teams working on civic tech projects.
- Support and organize community events like the National Civic Day of Hacking and Code Across

Mission Economic Development Agency (MEDA)   January**,** 2014 – Present (Tax Season)
- Prepare taxes for low-income residents of San Francisco.

2. Nick Grabenstein

Hello,

My name is Nicholas (Nick) Grabenstein and I'd like to be considered for membership in San Francisco's Open Source Voting System Technical Advisory Committee. I'm really excited about this for a number of reasons (new (hopefully) better voting system *and* open source?!) which I've detailed in my application below.

-nick

████████████████████████
████████████████████████
████████████

Why do I want to be on the TAC?

I really, truly, deeply believe in the social experiment that is democracy, but in order for democracy to work voting needs to work and right now I personally don't believe that it does. I want to help fix that. I believe that I have a unique and extremely useful background and point of view that would be beneficial to an open source voting technical committee. Additionally, while I understand that the committee will be meeting infrequently, I would be able to devote my full attention to the project of a reliable, trustable, verifiable, open source paper ballot system.

Professional Experience:

1) Software -- I worked a mopub for 3 years as their first employee and lead software engineer. I designed resilient, robust, distributed systems. My contributions helped scale mopub from 10k ads/day to 7billion ads/day. **Years experience**: 3.5
2) Hardware -- I cofounded a wearables startup focused on wearable batteries. I also have extensive experience working w/ microcontrollers albeit not in a professional setting. **Years experience:** 1.5
3) User experience -- No professional experience, but I have spent ~1.5 years building iOS apps with a focus on novel usability. **Years experience:** 0
4) Project management -- As mopub's lead engineer I was directly involved with PM'ing projects for the backend team. **Years experience**: 1.5
5) Agile methods in government procurement -- I have used agile and know how to, but in the context of gov't procurement I have no experience. **Years experience**: 0

Relevant skills and experience?

While I wouldn't consider myself to be a blackhat hacker by any means, I think it's fair to say that I actively and eagerly look for ways that systems can be abused and manipulated. I think it's crucial that any solution that the TAC ends up endorsing be thoroughly attacked and capable of withstanding said attacks; I believe that I am uniquely well-suited to the task of both quantifying and qualifying numerous attack vectors that could possibly be missed.

I would also bring a wealth of knowledge on the topics of distributed consensus and cryptocurrencies. While I completely agree that the notions of cryptocurrencies and voting systems seem somewhat oblique, I actually believe that the notion of a "trustless" system (ex: bitcoin network) that can converge to and agree on a trustable, verifiable system state (ex: who gave who some number of bitcoins, how many bitcoins each person has) is actually extremely in line with what I hope people would agree is the "ideal" (heh) voting system. I would love to use my skills and expertise to help the TAC explore the possibility of such a system.

Why do I believe OSVS is impt to SF?

I want to start off by saying that I don't actually think an OSVS is necessary. I *do* think it's important that the City of SF develop an OSVS, but my primary interest is in helping develop a system that is far more trustable and verifiable. I do think that developing an OSVS is a good step towards that goal, but I don't think it's the only one.

Having said that I actually do think it's very important for the City of SF to develop an OSVS.

San Francisco has established itself as the world's leading city for technological innovation, on the private side of things. I think that it is important for the city itself to take strides towards being the world's leading city for civic technological innovation and developing an OSVS would be a large step towards that goal. Any city that chooses an OSVS would be blazing a trail that the rest of the world would be following, I think it's extremely important for SF to be one of those trailblazers.

I'm also extremely optimistic about the interplay between open source and voting systems. A necessary facet of open source is community involvement and engagement. Anything that would increase the amount of the public's involvement in civic responsibility is a huge plus so the natural effects of open sourcing would be overwhelmingly positive in the context of a voting system.

What ideas do I have for making the TAC more effective?
I have no ideas how city committees work, and I have no idea how the TAC will be stymied or ineffective. I am proficient at figuring out and setting concrete, deliverable goals and am relentlessly efficient at meeting them. I'm confident that were I a TAC member I would be able to figure out and implement numerous ways to make the TAC more effective.

At the very least, having read the bylaws and realizing that the TAC meetings are somewhat optional for TAC members, I can commit to being at every single meeting thereby making the TAC that much more effective.

I'm also willing to just flat out do section 10 (create a website for the TAC). Gov't committees having websites isn't really something I feel should be optional. Not only do they increase transparency, they are also a huge driver of civic engagement. If people can see and interact with what is happening at anytime civic engagement is only going to increase. This is especially important for something like an OSVS where community engagement is a necessity.

Do I agree to bylaws?
Yes

References

Rob McQueen
Cofounder
Kado
██████████████

James Sun
Engineer
Twittter
██████████████

3. Carl Hage

I am interested in participating in the SF Open Source Voting project and am writing to be considered for the Technical Advisory Committee.

Since 1996 I have worked on the League of Women Voters' SmartVoter.org project (now merged with Maplight VotersEdge.org), processing state and county Election Management System (EMS) data from California and several other states to implement a nonpartisan, educational, voter information system with ballot lookup-- free for voters and candidates, sponsored by volunteers and donations.

I have long felt that the development of shared open source software to prepare, distribute, and audit election information is the best strategy to improve security, lower costs, and expand voter confidence in our electoral process. In working with many different vendors of EMS software and many county election departments, I've experienced some problems and limitations with these EMS' and was able to detect errors in data from virtually all counties. (Also, problems with the VIP Voter Information Project data exchange, used by Google's Civic API voter info system.)

I would like to contribute my experience in working with election data to guide the requirements and system architecture for the Open Voting Project to minimize software complexity, permit easy exchange and reuse of both software and data, and enable security and audit ability.

With the traditional proprietary EMS, there is a commercial tendency to claim security through secrecy and to hide limitations and vulnerabilities. The EMS generally operates as an isolated self-contained environment where exchange of data is a limited afterthought. This is the primary reason for data errors-- a closed system without outside scrutiny. In contrast, modern open source software tends to focus on data exchange and open sharing across the network. Facilitating data exchange can reduce the chain of printing and retyping that leads to errors and high cost, and permits auditing tools and outside scrutiny to detect and remove errors.

The CA Secretary of State sponsored some audits of commercial voting systems by researchers ("Red Team") under a nondisclosure agreement, and found serious problems. With open-source software, there is no NDA and code/system secrecy, so audits and reviews can be performed on an ongoing basis including the public at large. With large public scrutiny, security can be improved while lowering costs and mistakes.

Another aspect of open source voting is that the investment made by San Francisco is likely to be matched with other contributors, making a better product and lowering costs. Other users also contribute to testing, problem diagnosis, and support.

My background is both Electrical Engineering and Computer Science. In working with large Internet software projects, the success of SmartVoter.org (and it's low cost) is a testament to good choices in system architecture. Several other similar efforts have come and gone, spending vastly more money and having performance problems on election day (e.g. GrassRoots.org). LA County's EMS takes 10 hours to export street data (which also has some errors, e.g. incorrect street direction on some segments), while the SV software can process that data (including error detection) in about a minute. I would like to help insure the Open Source Voting avoids the pitfalls of high cost, performance problems, or data errors. Auditing of the data (not done with current EMS') is also an important requirement.

Historically, my background has been in electronic design automation (EDA also called electronic CAD), so have worked in hardware and electronics. I have done some work in embedded computers, so can help setting requirements for hardware acquisition.

I have also done some work in computer security and forensics and have testified as an expert witness in legal cases involving intellectual property disputes, where investigation and gathering of computer evidence was required. Thus, I also have some knowledge in being able to set requirements and review solutions to security issues, auditing, and vulnerabilities.

Note, there may be a conflict between my experience in working for the LWV in processing election data and the "Statement of Incompatible Activities", section III.A.1.f. I am a consultant, collecting, analyzing, and reporting election information (the purpose of SmartVoter.org). This work, however, is nonpartisan, qualifies as a 501c non-profit, and deals with public data. (Does not benefit any specific campaign or receive payments for services from a campaign.) The data provided from this project is open, and has been shared with some other organizations and researchers.

If I am not selected to be on the TAC, I am still interested in participating and/or contributing to the project and working with the TAC as a member of the public.

Contact Details:

References:

Carol Watts █████████████
(League of Women Voters)
███████████

Lothar Linhard <█████████████
(Concept Engineering, EDA Software)
████████████████

David Makman ████████████████

[Makman Law| Bay Area Law Firm That Addresses International …](#)

makmanlaw.com

Trusted Advisors to Technology Companies. The Law Offices of David A. Makman is a boutique firm in San Mateo, close to San Francisco as well as Silicon Valley with an …

(Attorney, legal issues involving technology)
███████

Attachments:

- Resume
- Application Acknowledgement Form

Available as an Independent Consultant

- Contract software development, specializing in:
    - Electronic Design Automation applications
    - Internet-based Infosystems
- General assistance or contract software for:
    - EDA systems integration
    - WWW and other Internet based Infosystem design
    - Database conversions and data interchange
    - Graphics and Graphic User Interfaces
    - Computer network hardware/software
    - Operating system installation, management, or device driver implementation
    - Software porting and system independent software development
- Computer Forensics & Security: intellectual property disputes

Consulting Experience (5/88-Present)

- Developed system software for the award winning smartvoter.org & guidetogov.org voter information systems, greatschools.net school information, online flood/disaster maps for the State of California.
- Developed a schematic synthesis system now being marketed as an OEM toolkit.
- Legal Expert Consultant, computer forensics- discovery of evidence in IP disputes
- Implemented interfaces/translators for 6 different schematic systems and 5 netlist formats using EDIF and proprietary formats.
- Participated in the EDIF and CFI standards development.
- Participant in several IETF standards, co-author of an Internet RFC on EDI.
- Assisted 2 companies in implementing TCP/UDP/IP and IPC software.
- Assisted in the development of a large GUI system for real-time control applications.
- Developed an interface between a real-time data acquisition system and a database/data analysis system.
- Assisted in porting projects to SUN/UNIX, VAX/VMS, IBM RS6000, MSDOS, and DecStation computers; X-Windows, MS-Windows, OS2/PM, DEC-UIS, DecWindows, Motif, and OpenWindows graphics systems.

Clients Include
- EDA/CAD: Concept Engineering, Engineering DataXpress, Exemplar Logic, Mentor Graphics, Synopsis, Viewlogic, EPIC, Silicon Architects, Cad Framework Initiative
- Internet/WWW: Smart Valley Inc., League of Women Voters, GreatSchools.net, San Jose Mercury News, County of San Mateo, State of California, National Science Foundation
- Computer Forensics: Makman Law, Howrey LLP
- Networking/GUI: Expert Ease Systems, Strawberry Tree, Athena Microsystems

Prior Work Experience

7/86-5/88   EDA Systems Corp - Startup in Electronic Design Automation

Contributed to the design of EDA's Engineering Database and Design Management products; implemented portions for the user shell/browser of the design manager, graphic database and storage management subsystems, interprocess communication, and system interfaces; installed and supported a network of 22 VAX and 2 Apollo systems.

10/82-5/86   Daisy Systems Corp - IC Layout Div/Technology Development

Lead a group developing automatic layout synthesis; contributed to the design of a next generation symbolic layout system; developed a gate array layout system on a hardware accelerator; participated on the EDIF committee during the initial formulation; evaluated and supported the silicon compilation project.

9/79-10/82   Signetics - Corporate CAD Dept

Lead a group developing a schematic entry and integrated CAE system; developed a high performance symbolic layout and design rule checking system for gate arrays; worked in an IC layout group to learn CAE system requirements.

6/77-9/78   Philips Laboratories - Computer Systems Research
(consulting 9/78-9/79)

Participated in research on CAD (circuit simulation and device modeling), programming languages, and microcomputer applications; developed a high speed alternative for circuit simulation of digital ICs.

9/74-6/77   Boulder Valley Schools - Computer Center

Systems programming for an IBM/370 timesharing system; supported educational application programs; developed a database system for locating available programs, a system accounting program.

6/73-6/74   Dynastor - Startup making floppy disk systems

Developed a DOS and diagnostic/system-test program; participated in minicomputer peripheral interface design.

9/71-6/73   Sierra Research - Atmospheric research

Helped develop a DOS, minicomputer peripheral interfaces, atmospheric modeling programs; developed an atmospheric data acquisition and analysis system.

Education

1979   MSEE - University of Maine, Orono (GPA 4.0)
            Research assistant 9/78-9/79

Thesis: A Circuit Simulation Program Oriented for Mini/Microcomputers
            (also published as a Philips Labs technical report)

1977 BSEE & CS - University of Colorado, Boulder (with honors)

Publications

Hardware Acceleration of Gate Array Layout, 22nd Design Automation Conf., June 1985.

Efficient Op Amp Circuit Analysis with Manufacturer Specified Macromodel Parameters, IEEE Trans. Computer-Aided Design, July 1982.

An Efficient Symbolic Layout and Design Rule Checking System for Gate Arrays, Intl. Conf. on Circuits and Computers, October 1980.
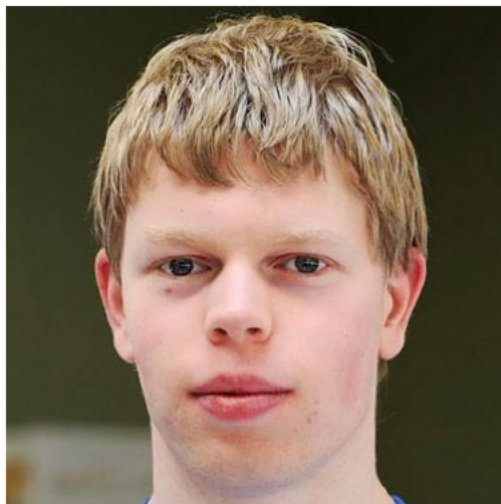
4. Roan Kattouw

████████████████████████████████████

Roan Kattouw | LinkedIn

www.linkedin.com

View Roan Kattouw's professional profile on LinkedIn. LinkedIn is the world's largest business network, helping professionals like Roan Kattouw discover inside ...

Github: ████████████████████

catrope (Roan Kattouw) · GitHub

github.com

catrope has 26 repositories available. Follow their code on GitHub.

Why do you want to be on the TAC?

I want to help ensure that the voting process in San Francisco and across the country remains secure and accountable. I immigrated to the United States from the Netherlands, where electronic voting was rolled out slowly over the course of about a decade until an activism group sued the government and provided evidence that the machines used were insecure. Those specific machines were banned by the courts, and the government has not tried to reinstate electronic voting since.

This all played out a decade ago, so every election during my adult life was carried out entirely using pencils and paper ballots, and nobody my age has ever voted any other way. Electronic voting is the stuff of legend for my generation; a failed experiment. Coming to the US, it was somewhat of a culture shock to discover that electronic voting machines are still used in many places, despite how intransparent and error-prone many of them are. Every two years, we see news stories about votes being switched by a machine, but nothing changes. As a software engineer, especially, it's frustrating to see people's exercise of their democratic rights being made more difficult or denied altogether due to bad technology. I would like to do my part to create a generation too young to ever have experienced unaccountable or faulty voting machines.

Section 3 professional experience

I have 8 years of professional experience in software engineering (category 1), all at the Wikimedia Foundation, the non-profit organization operating Wikipedia, where I have worked on a variety of front-end and back-end projects since 2009. I was one of the two people who built the JS/CSS asset delivery system that is still used today, and spent three years working on the visual (WYSIWYG) editor for wiki pages, including one year as the team lead. I've spent the last two years leading a different team, working on notification and discussion systems, among other things. I am also one of the people who receive security reports at security@wikimedia.org, worked on migrating our version control from SVN to git, and have mentored students volunteering for Wikimedia through Google Summer of Code. All my work for the Wikimedia Foundation has been open source (as required by my employment contract), and all the projects I have worked on have been open source projects with contributions from outside the organization.

What other relevant skills and experience would you bring to the TAC?

I am a long-time member of the open source community, having contributed to open source projects since 2007 and having attended and spoken at many open source conferences, such as OSCON and Linux.conf.au.

At Wikimedia, I have led two software engineering teams, have done a lot of code review throughout my tenure, and have helped shape the organization's code review practices. For the past three years, I have been one of the six members of MediaWiki's Architecture Committee.

I have a Bachelor's degree in Computer Science from the University of Groningen, and a Master's degree in Computer Science from Stanford University with a specialization in computer and network security.

Why do you believe it is important for San Francisco to develop an open source voting system?

Many different voting systems are used across the US, and many of them don't suffer from the kinds of flaws that make the news or that caused courts in other countries to ban them. Systems that leave a paper trail for example, are less problematic than ones that store and count all votes electronically.

However, all systems currently in use operate using secret software that cannot be examined by the public. When the German Constitutional Court banned the voting machines in use at the time, it based its decision on the right of members of the public to observe, examine and verify every step of the counting process. I believe that elections and the processes around them should be as transparent as possible so that those who voted can be confident that their votes were counted correctly and that the outcome is genuine. This is only possible if the software used in the process is open source and can be examined by anyone. Current systems use closed software that is open only to its manufacturer; one of the reasons why https://www.youtube.com/watch?v=-PLTZxLNTUk was such a successful satirical video was because many people did not trust Diebold with the integrity of the election. While there were reasons not to trust Diebold in particular, votes should not need to trust any one company, but should instead be able to verify the entire election process themselves.

Besides the code being visible to the public, open source software has other benefits as well. An open development process allows the public to gain insight not only into what a system does, but also into how it was built and why. Depending on how open the process is, it could also allow concerned citizens to identify problems and suggest fixes. It also avoids vendor lock-in, allowing the city to use different vendors for future maintenance and enhancement of the system than the one that originally developed it. This is also one reason why an open source voting system would be cheaper: vendor lock-in leads to higher costs, as evidenced by the Clipper Card (whose software vendor charges exorbitant fees for the smallest tweaks to the system).

Finally, an open source voting system would be easier and cheaper to adopt by other cities, counties and states once it has been developed. I hope that, once pioneered here in San Francisco, this open source voting system (or others like it) will spread across the country and make the electoral process more transparent nationwide. With a high number of technically skilled citizens, and many vendors in the area, San Francisco is well-positioned to lead the country in developing a system that can then be reused elsewhere.

What ideas do you have for making the TAC more effective in fulfilling its duties?

I would like for the TAC to help define what exactly the "open source" part of the open source voting system project means. Will one vendor develop the system in a closed process and then make it open source at the end, throwing a finished product over the wall? Will development take place in the open, but among a closed set of people? Will contributions from outsiders be accepted? How will bug reports, feature requests and suggested patches be handled, both during development and after? I don't claim to have the answers to any of these questions, but they are important to consider. "Open source" is not a magical phrase, it has different forms with different trade-offs, and working in an open software development process is a skill on its own.

Relatedly, the TAC should provide input on who should own the copyright to the developed software; what its license should be; whether the project should have a contributor license agreement (CLA) and/or a code of conduct (CoC) and what is in them; and other things of that nature. The TAC should also consider to what extent open hardware should be used or developed, and whether each of the foregoing questions should be answered differently for hardware.

The TAC should seek input from security experts, from advocacy groups that have raised concerns with electronic voting systems (of any kind) in the past, and from established organizations in the open

source world, such as the Free Software Foundation and the Software Freedom Conservancy, among others.

Have you reviewed the TAC Bylaws? Do you agree to abide by them?

I have, and I do.

Professional references
Trevor Parscal
Director, Head of Editing
Wikimedia Foundation
███████████████

James Forrester
Senior Product Manager
Wikimedia Foundation
███████████████

Projects I have contributed to
MediaWiki (the software that runs Wikipedia and its sister projects):
https://github.com/wikimedia/mediawiki
VisualEditor, a WYSIWYG editor for wikitext: https://github.com/wikimedia/VisualEditor and
https://github.com/wikimedia/mediawiki-extensions-VisualEditor
Echo, a notification system for MediaWiki: https://github.com/wikimedia/mediawiki-extensions-Echo
Flow, a discussion system for MediaWiki: https://github.com/wikimedia/mediawiki-extensions-Flow/

Roan Kattouw

Principal Software Engineer at Wikimedia Foundation

Summary

N/A

Experience

Principal Software Engineer at Wikimedia Foundation
May 2009 - Present

Education

Stanford University
Master of Science (MS), Computer Science, 2012 - 2014
Rijksuniversiteit Groningen / University of Groningen
Bachelor of Science (BSc), Computer Science, 2008 - 2011

5. Sanny Lin

Hello,

Below is my application for the Open Source Voting System TAC. Thank you for your consideration. I hope to hear back soon.

Regards,
Sanny

████████████████

███ █

██████ ████████████████

██████ █

█████ █

Application Questions

1. Why do you want to be on the TAC?

I want to leverage my background in technology and social design to collaborate with other technologists to help increase civic participation. I believe that in order to make everyone's vote more effective, we need to make voting technology accessible, trustworthy, and desirable to use.

2. Please review Section 3 of the TAC Bylaws, and in particular the part describing the types of professional experience desired for TAC members. List all categories with which you have relevant professional experience. For each such category, provide an overview of your experience, including your number of years of experience.

My expertise falls under **category 3—User experience (UX) or human-computer interaction (HCI)**. I studied human-centered design in undergrad and grad school. I have worked as a

designer and researcher of digital products for over 8 years. I also have 2 years of experience in category 4—the product management of software applications.

3. What other relevant skills and experience would you bring to the TAC?

For 3 years, I led project teams as part of Design for America working on local social impact program.

4. Why do you believe it is important for San Francisco to develop an open source voting system?

San Francisco is uniquely equipped with technologists, a diverse population, and a history of cultural innovation to develop a model of decentralized voting that others can borrow from.

5. What ideas do you have for making the TAC more effective in fulfilling its duties?

I recommend using human-centered design principles to understand the current attitudes and behaviors that people have around voting and voting systems.

6. Have you reviewed the TAC Bylaws? Do you agree to abide by them?

Yes and yes.

References

Reference #1
Name: Emelyn Baker
Position: Product Designer
Company: Brit + Co
Contact:

Reference #2
Name: Megan Marquardt
Position: Tech Lead
Company: Bloc
Contact:

Summary of Work Experience

Linkedin: linkedin.com/in/sannylin
Portfolio: sannylin.com

Sanny Lin

Design @ Bloc

Summary

Product designer making in San Francisco and wearing crazy gadgets. Always doing, always building, always learning. Have experience herding cats. Forever a generalist.

Experience

Product Designer at Bloc, Inc.

April 2015 - Present

Our mission: Help everyone pursue their craft and improve their lives.

I'm building platform tools for mentors and students, leveraging an end-to-end design process. Working directly with users and stakeholders to gather feedback, identify opportunities, evaluate product requirements, and ship weekly platform updates. Agile, iterative, full-stack product designing.

Teaching Assistant at University of Washington

September 2014 - December 2014 (3 months)

TA for 30-student graduate-level course HCID 530: Usability and User Research Methods.

User Experience Design Intern at Google

May 2014 - September 2014 (4 months)

+ Joined the Google Fiber team to design the mobile web experience for the Fiber sign-up process.

+ Drafted a product requirements document for approval by the design manager and product manager before kickoff.

+ Mapped out the user flow for 40+ distinct use cases and presented designs to stakeholders (marketing, engineering, product) bi-weekly, with consideration for localization.

+ Produced an interactive prototype and worked with a user researcher to conduct cognitive walkthroughs with 11 participants, leading 3 of the sessions.

+ Design was launched December 2015.

HCI Research Assistant at University of Illinois at Urbana-Champaign

April 2013 - June 2014 (1 year 2 months)

Research themes: Information visualization, social computing, hackathons

+ Used an existing dataset (60+ hours of annotated videos) to design an original data visualization for use in identifying children with developmental delay.

+ Collaborated with an HCI graduate student to implement a webtool for archiving and exploring the visualizations using d3.

+ Conducted user studies with 10 participants (clinicians and behavioral researchers) to evaluate the visualization and the tool.

+ Presented in a weekly meeting with distributed research group (from Georgia Tech, MIT, CMU, and UIUC) to discuss overarching behavioral analytics work and receive feedback on research. Gave poster presentation at an annual summit.

+ Presented initial work at VAHC 2013 in Washington, DC: "Visualizing Patterns of Social and Communicative Behavior in Children Using Plexlines"

+ Co-authored full paper presented at AMIA 2016: "Plexlines: Tracking Socio-communicative Behaviors Using Timeline Visualizations"

Director of Media at HackIllinois
October 2013 - May 2014 (7 months)

+ Oversaw a team of 15 students (4 core) to coordinate design, media, marketing, audio-visual, and mobile app strategy and development for the first annual UIUC hackathon.

+ Defined the logo, brand, and visual language that is still used in subsequent years.

+ HackIllinois 2014 drew 800+ student participants from six states and raised $800,000.

+ Worked with HCI professor to conduct research on the metrics of success at hackathons with surveys (over 300 respondents, nearly 50% of the hackathon participants) and semi-structured interviews (30 interviews).

Co-Founder & Studio Lead at Design for America
November 2011 - May 2014 (2 years 6 months)

+ Ran a multidisciplinary design studio as part of the greater DFA network.

+ Led bi-weekly workshops on design thinking and human-centered design methodology.

+ Mentored and advised project teams of 4-8 students from cross-disciplinary backgrounds to tackle a local community issues related to electronic waste, healthcare, homelessness, driving independence in older adults, and natural disasters.

+ Partnered with faculty sponsors in the departments of Design, Business, and Engineering.

+ Grew the studio from 10 to 60 dedicated, registered members.

+ Worked with leadership team of 3~5 Studio Leads to coordinate operations, raise funding, conduct public outreach, and communicate with Northwester Studio ("HQ").

Undergraduate Research Fellow at National Center for Supercomputing Applications
December 2012 - August 2013 (8 months)

+ Created interactive data visualizations in Unity 3D, TouchOSC, and JavaScript, using Laban Movement Analysis as a framework for classifying types of human gestures.

+ Recorded 50+ gestures with Kinect to be used as training data in machine learning.

+ Identified opportunities to develop a scalable system for exploring new methods of gestural interaction and natural user interfaces via prototypes.

Interaction Designer

August 2011 - December 2012 (1 year 4 months)

   + Participated in 2 issues as a graphic designer, and 1 issue as an interaction designer.

   + Initiated a project to develop an iPad companion app to the printed journal (team of 3 designers, 1 iOS

    developer, and 1 Creative Director).

   + Published app to iOS app store.

User Experience Design Intern at State Farm Insurance

May 2011 - December 2012 (1 year 7 months)

   + Strategized, researched, and prototyped methods of tracking the quantified self in topics of finance,

    education, and personal health to help customers reduce the risk of everyday life and meet their goals.

   + Validated ideas with user research, prototypes, whitepapers.

   + Worked on cross-functional project teams of 3-6 with business, marketing, and engineering.

   + My first introduction to "mobile-first."

   + Presented three product proposals to a board of senior stakeholders.

Graphic Designer at University of Illinois at Urbana-Champaign

August 2009 - December 2011 (2 years 4 months)

   + Coordinated publicity to advertise events and monthly guests-in-residences at Allen Hall/Unit One.

   + Designed signage, digital displays, and identities to promote the residential living and learning experience

    across all University dorms and dining.

   + Produced 2-5 design directions for design review every week.

Layout Designer for buzz Magazine at Illini Media

January 2011 - May 2011 (4 months)

   Collaborated with writers, editors, and photographers to publish a weekly magazine that covers local eats

    and entertainment. In charge of the information architecture & design of covers, articles, graphs and data

    visualizations, and special feature spreads. One of three designers working on each issue.

Education

University of Washington

Master's Degree, Human Centered Design and Engineering, 2014 - 2015

Harrison Metal

General Management, 2016 - 2024

Bloc

Frontend Web Development, 2015 - 2015

University of Illinois at Urbana-Champaign

BFA, Graphic Design, Industrial Design, 2009 - 2014

Activities and Societies: Graphic Design Students at Illinois, Industrial Designers Society of America, Design
 for America, Solar Decathlon Team, HackIllinois

Honors and Awards

Top Writer 2016, Design for America Legacy Award, "Engaging Makers in Human-Centered Design" Public
Engagement Grant, Third Place for the Blue Button Narrative, OpenIDEO e-waste Challenge Finalist, First
Place for Virtual Dugout, Typographic Excellence for Ninth Letter Vol. 8 No. 2, Honorable Mention &
People's Choice Nominee for Love Champaign

6. Jared Luxenberg

██████████████
████████████████████
███████████████
██████████

Why do you want to be on the TAC?

Security of our voting system is central to our democratic process. Existing computerized voting systems are subject to remote hacking and tampering. Developing a secure, paper-based alternative that will reduce costs and increase security over proprietary systems is a great idea and I'd be excited to be involved!

Relevant professional experience:

1) Software Engineering
I have over 10 years of experience in software engineering. I've worked on distributed systems at Amazon, Nest, Google, and Twitter. Having worked on large Internet-facing systems, I have an understanding of common pitfalls when designing secure systems.

3) UX and HCI
I hold a dual degree from Carnegie Mellon University in Computer Science and Human Computer Interaction. I've received training in Contextual Inquiry and other user-centric design methods.

References can be provided upon request. I've attached my resume (slightly out of date; I not longer work at Twitter and am currently consulting for a few startups).

What other relevant skills and experience would you bring to the TAC?

I've worked with Agile methods for running software development projects. I have experience prioritizing and triaging tasks to ensure that the development process happens iteratively in small steps. When tasks are completed in small iterations, the team can more easily adapt to changing requirements.

Why do you believe it is important for San Francisco to develop an open source voting system?

Someone has to do it, and San Francisco can draw on a large pool of talented tech workers to help with this project.

What ideas do you have for making the TAC more effective in fulfilling its duties?

I recently attended a talk by Jennifer Pahlka (former co-founder of the US Digital Service). She highlighted procurement as one of the reasons that government software is so awful. The RFP process prohibits the use of iterative design based on testing with users. It is, by necessity, a design by committee.

The TAC can help to avoid this by splitting up the RFPs into smaller modules. It would be great if the TAC could do one small batch of RFPs, take those results, and then iterate with another small batch of RFPs. In this way, the TAC (or perhaps a third party hired to do this) could run an iterative design process within the legacy procurement process.

Have you reviewed the TAC Bylaws? Do you agree to abide by them?

Yes!

Thank you for your consideration. I look forward to working with the TAC!

- Jared

--

Jared Luxenberg

Objective

Improving the productivity of other developers. Bringing new ideas from conception to implementation. Making the world more magical; bringing about the future.

My areas of interest include data processing, highly available web services, and distributed systems design.

Education

Carnegie Mellon University, Class of 2008, Pittsburgh, PA *Bachelors of Science, Computer Science and Human Computer Interaction.*

- QPA: 3.59

Professional Experience

Twitter, Software Engineer   *June 2015   present*

- Enhanced and maintained one of the largest systems at Twitter (the User service)
- Worked to transition many internal stakeholders from a legacy audit log system
- Documented internal processes and code for the benefit of other team members

Nest Labs, Inc., Software Engineer   *March 2011   May 2015*

- Contributed code to Scala based synchronization web service used by all Nest devices and apps
- Responsible for setting code and Git commit log style guides
- Designed and implemented a tool which runs Demand Response events on a large fleet of thermostats
- Responsible for many internal infrastructure projects and improvements
- Built software used to manage cloud based deployment of web services
- Developed and scaled a system capable of storing and processing log files from a large number of sources

Self, Freelance Coding Contractor   *November 2009   March 2011*

- Designed and built hardware and software solutions for Envision Telepharmacy
- Developed reusable Javascript based components for use in rich web applications
- Worked with Gumstix embedded Linux platform to develop medical imaging devices

Amazon.com, Software Development Engineer   *Sept. 2008   Sept. 2010*

- Developed and operated scalable, highly available services for the Elastic Compute Cloud
- Coded / tested the algorithm that sets a market price for EC2's "Spot Instances" product
- Built internal reporting tools that were used to drive mission critical monitoring and business metrics

Green Hills Software, Software Engineer Intern   *Summer 2007*

- Learned how to program a system on a chip device
- Wrote low level device driver (using C) for a proprietary realtime operating system used in anembedded environment

Yahoo Inc., Software Engineer Intern   *Summer 2006*

- Learned PHP and contributed code to a multitiered PHP/Java system
- Responsible for implementing an internal reporting system using PHP and Java

Technical Skills

Languages: Scala, Ruby, Java, Shell Scripting, SQL, XHTML/CSS, JavaScript, C/C++

Software: Git, Splunk, Emacs

7. Alex Rattray

From: Alex Rattray ██████████████████████
Sent: Tuesday, May 9, 2017 4:34 PM
To: Commission, Elections (REG)
Subject: TAC Application – Alex Rattray

Hi,

I would like to apply to the SF Open Source Voting TAC.

██████████

█ ████████████████████████████
████████████████
██████████████

Application questions:

1. **Why do you want to be on the TAC?**
   I want to se the open-source voting project succeed here in SF and spread across CA and the nation. This will be a challenging project and I want to contribute as much as I can to ensuring its success.
2. **Please review Section 3 of the TAC Bylaws, and in particular the part describing the types of professional experience desired for TAC members. List all categories with which you have relevant professional experience. For each such category, provide an overview of your experience, including your number of years of experience.**
   1) I have been building software for over 6 years (professionally for 3), using open-source software since the beginning of that time, and have been actively contributing to open-source software for the past year.
   2) I do not have experience with hardware engineering.
   3) I have lead the UX/HCI efforts on several small software projects, including Emerald Exam, which created secure exam-taking software used by over a thousand students to take assessments. The software had to be intuitive and approachable to a wide range of users on their first time experiencing the software (in an exam) and while the user was under stress.
   4) I have led several small software teams (typically 2-3 engineers), including at Hired, Babajob, Emerald Exam, PennCycle, and others. This included all aspects of product and project mangement.
   5) I implemented Agile methodologies at Babajob, and followed them at Hired. I do not have experience with government procurement or government contracting.
3. **What other relevant skills and experience would you bring to the TAC?**
   A deep passion for electoral systems, voting reform, and better technology in government. Entrepreneurial drive.
4. **Why do you believe it is important for San Francisco to develop an open source voting system?**
   We need to trust our voting systems, and we need our voting systems to be responsive to innovations in our elections that can lead to better outcomes and fairer elections.
5. **What ideas do you have for making the TAC more effective in fulfilling its duties?**
   The TAC will need to work closely and collegially with Director Arnst and the Dept of Elections. The TAC will need to actively reach out to experienced members of the community for advice, advocacy, and outstanding vendors.
6. **Have you reviewed the TAC Bylaws? Do you agree to abide by them?**
   I have and I do.

References:

- Name: Chakri Uddaraju
- Position: Engineering Manager (fmr VP Engineering)
- Company: Facebook (fmr Hired)

Alex Rattray

Entrepreneurial Software Engineer

███████████████

Summary

Entrepreneur at heart; software engineer by trade; business & operations by education. I'd like to be working to make the world a better place.

I am always interested in chatting with founders of technology companies in the Education, Recruiting, and Government spaces.

http://alexrattray.com

As of January 2017 I am working full-time on creating LightScript (http://lightscript.org), a cleaned-up syntax for JavaScript.

Experience

Software Engineer at Hired, Inc.

October 2015 - January 2017 (1 year 3 months)

Rails, React, etc. Led a couple projects, had a bunch of ideas, shipped a lot of code, did work.

Senior Technology Fellow at Babajob

March 2015 - July 2015 (4 months)

Babajob is India's leading employment portal for blue-collar workers and one of Bangalore's fastest-growing startups. The company, a member of the Khosla Ventures Impact Fund's portfolio, has a strong social mission of matching undereducated Indian workers with better economic opportunities.

While I was there, the company raised $10mm, grew revenue 30% month-on-month, and more than doubled in headcount.

I focused on improving the capacity of the engineering team through process overhaul, aggressive hiring, and revamping our technology strategy.

Also:
- Rewrote a complex core application from Angular to ES6/React.
- Gave two talks on React in the Bangalore JS community.

- Functioned as a Product Manager on a special project to improve the number of Job Seekers who show up to their Job Interviews.

Freelance Software Engineer at Toptal

April 2014 - January 2015 (9 months)

Contracted with a handful of funded startups while traveling through Asia. Designed interfaces, orchestrated servers, ran a podcast, wrote code.

Used Angular, React, Docker, Python, others

Co-Founder, CEO, CTO at Emerald Exam

March 2012 - March 2014 (2 years)

Emerald Exam was an education technology product used by thousands of students at over a dozen institutions, including The Dalton School, Trinity, and Horace Mann. First Round Capital's Dorm Room Fund invested in the company, which we grew to seven people before closing our doors in March of 2014.

http://chronicle.com/article/The-Blue-Book-of-the-Future/143319/

http://emeraldexam.com

Co-Founder, Director of Operations

May 2011 - October 2012 (1 year 5 months)

PennCycle is a bike share for the Penn community. Operating under the umbrella of Penn Student Agencies and funded by a Penn Green Fund Grant, PennCycle provides unlimited access to bicycle rentals to students, staff and faculty for a small monthly fee.

Responsible for purchasing, strategic partnership, financial planning and management, market research and demand modeling, software development, and web design.

Co-Founder, CEO

August 2011 - June 2012 (10 months)

Designed and developed (front-end and back-end) web application to facilitate market research. Prototype at decisioncandy.com. Selected to be a Wharton Venture Initiation Program company.

Intern at A Better Chance Foundation

October 2010 - May 2012 (1 year 7 months)

A Better Chance is a nonprofit organization that recruits, refers and supports young people of color at more than 300 of the nation's leading boarding, day and public schools.

Designed and maintained website for Mid-Atlantic Region of A Better Chance. Provided logistical support for data management. Assisted in event organization.

Research Assistant at The Wharton School

May 2011 - September 2011 (4 months)

  Research Assistant at Sol Snider Entrepreneurial Research Center, working under Ian MacMillan, Dhirubhai
   Ambani Professor of Innovation and Entrepreneurship

  Conducted statistical work on market analysis, market sizing, and customer segmentation.

  Investigated novel and historical routes to profitability for traditional and social startups and joint ventures.

  Developed web application to track relative P/E ratios for all stocks in NASDAQ and NYSE.

Founder, Publisher, Editor-in-Chief

January 2010 - June 2010 (5 months)

  The Backwoods was an independent student-run newspaper distributed at Shorewood High School and the
   surrounding area.

  7 issues were published between February and June.

Associate Editor

September 2007 - January 2010 (2 years 4 months)

  The Kolus is the official student publication of Shorewood High School.

  Positions:
  Sophomore year: Backpage Editor, In-Depth Editor
  Junior year: In-Depth Editor, Cover Editor
  Senior year: In-Depth Editor, Cover Editor, Associate Editor, Graphics Editor

  As associate/graphics editor Senior year, spearheaded an effort to re-brand the effete, bland Kolus. This
   included a total redesign and an expansive reader survey effort that struck to the heart of what worked, what
   did not work, and what could work for the Kolus.

  Resulted in two issues lauded as "best ever Kolus" issues, one of which won Best in Show at the
   state-wide WJEA competition.

  Resigned January 2010 to create The Backwoods.

Founder

November 2007 - 2010 (2 years 2 months)

  Shoreline Environmental primarily comprised of an effort to market plaques shaped like light switch cover
   plates that read "Help Keep Washington Evergreen / Please turn off the lights when you leave the
   room" and featured a Spaceneedle and forest graphic.

Talks with Seattle City Light proceeded well, but before we could close a deal, the economy tanked and their budget collapsed. The plaques would have been distributed to businesses for placement in restrooms and offices.

Co-Founder

April 2007 - November 2007 (7 months)

A small company I started with a friend who made women's bags for schoolbooks and the like.

Education

University of Pennsylvania - The Wharton School

B.S. Economics, Operations and Information Management, 2010 - 2014

Activities and Societies: PennGreen, Penn Environmental Group

Shorewood High School

2006 - 2010

Activities and Societies: Junior State of America, Founder, President (2006-2009) Amnesty International, Treasurer (2009-2010) FBLA, Vice President (2007-2008) Thespian Troupe 108, DECA, French Club, Cross Country, others

---

8. Tyler Sax

From: Tyler Sax ██████████████████ >
Sent: Tuesday, May 9, 2017 11:38 AM
To: Commission, Elections (REG)
Subject: Application: Open Source Voting System Technical Advisory Committee (TAC)

To whom it may concern,

I write to apply for a position on the Technical Advisory Committee serving the San Francisco Elections Commission's Open Source Voting project. Please see my application attached and my personal information below.

Best,
Tyler Sax
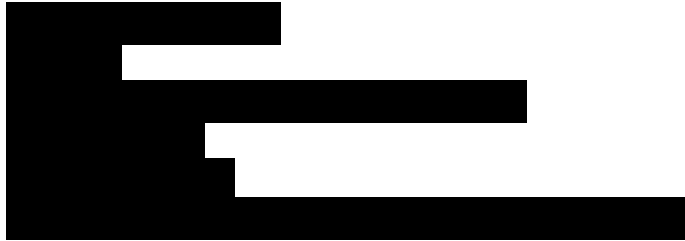
Tyler Sax | LinkedIn

www.linkedin.com

View Tyler Sax's professional profile on LinkedIn. LinkedIn is the world's largest business network, helping professionals like Tyler Sax discover inside …

References
Cassidy Beeve-Morris
Product Manager, Facebook
████████████

Jason Tarn
Manager, Business Integrity, Facebook
████████████

Open Source Voting System Technical Advisory Committee (TAC)

Applicant: Tyler Sax

May 9, 2017

WHY DO YOU WANT TO BE ON THE TAC?

Having followed the work of the Commission in its endeavor to push San Francisco forward to adopt open source voting, I am convinced that this effort is both worthy of the highest level of effort and ultimately best informed by citizen experts. The City has made already made tremendous strides by making open source voting politically feasible - now it's time for our community of civically-engaged technology experts to contribute to this effort by lending the time and expertise necessary to ensure the project's success.

The proposal to overhaul our voting system in favor of open source technology requires grappling with political, technical, and economic questions, many of which the Commission and the Department of Elections are well-equiped to answer and some of which they are not. When it comes to the technical questions regarding the development and maintenance of such a system, I hope to do my part to foster the success of this project by lending the experience I have in managing large-scale software development.

Most importantly, I believe public service is a duty. The luckiest among us get to serve our communities where our greatest skills meet the public's greatest needs. By submitting this application I am committing to contribute those skills to what I see as one of our community's greatest needs.

PLEASE REVIEW SECTION 3 OF THE TAC BYLAWS, AND IN PARTICULAR THE PART DESCRIBING THE TYPES OF PROFESSIONAL EXPERIENCE DESIRED FOR TAC MEMBERS. LIST ALL CATEGORIES WITH WHICH YOU HAVE RELEVANT PROFESSIONAL EXPERIENCE. FOR EACH SUCH CATEGORY, PROVIDE AN OVERVIEW OF YOUR EXPERIENCE, INCLUDING YOUR NUMBER OF YEARS OF EXPERIENCE.

Project management of software projects: I have four years' experience managing the development of large scale software systems for Facebook. I currently serve as Facebook's Product Manager for Ad Quality, leading a team responsible for protecting Facebook's high level of engagement while growing the company's $30B+ annual revenue stream form advertising. Relevant skills include scoping and designing large scale technical systems, conducting user research, writing roadmaps for complex technical projects, and managing cross-functional teams.

Software engineering: In addition to to my primary experience as a Product Manager, I have

secondary experience studying and developing software and websites for the last 8 years. From 2009-2013 I studied Computer Science as an undergraduate at Georgetown University and worked as a web developer for 2 political advocacy groups where I developed front-end experiences and PHP applications. More recently, in the last four years at Facebook I have continued to maintain my developer status by building internal tooling with a focus on Python and PHP-based applications.

WHAT OTHER RELEVANT SKILLS AND EXPERIENCE WOULD YOU BRING TO THE TAC?

In addition to my experience managing software development and working in the political space, I have experience with issuing RFPs and reviewing grant proposals that I think would prove useful in evaluating and working with potential contractors involved in the development of an open source voting system. In 2012, I co-founded the Social Innovation and Public Service Fund at Georgetown University - a $1.5M endowment dedicated to funding social ventures for the public good. During the year that I served as the Fund's inaugural managing director, we reviewed dozens of grant proposals and ultimately funded several which went on to successfully build social value and encourage the recipients' commitment to public service.

WHY DO YOU BELIEVE IT IS IMPORTANT FOR SAN FRANCISCO TO DEVELOP AN OPEN SOURCE VOTING SYSTEM?

The most fundamental benefit of an open source voting system is security. The voting software and hardware used today are proprietary, "black box" systems whose security is likely fragile because their details are unknown. Security research has demonstrated the vulnerability of these systems. An academic study (performed at the request of the Secretary of State of California) detailed the weaknesses of the particular voting system ("Sequoia") in use at the time:

> *We found significant security weaknesses throughout the Sequoia system. The nature of these weaknesses raises serious questions as to whether the Sequoia software can be relied upon to protect the integrity of elections. Every software mechanism for transmitting election results and every software mechanism for updating software lacks reliable measures to detect or prevent tampering.*

By contrast, an open source system where the source code and hardware designs are available for public inspection would benefit from the scrutiny of a large developer community

and would ultimately be more secure than a proprietary system controlled by commercial interests.

Second, an open source system may be significantly less expensive to operate in the long-run. San Francisco (like most municipalities) spends millions of dollars per year licensing technology from elections vendors. An open source system would be free to use, which could dramatically alter the cost structure of administering an election (potentially freeing up budget that could be used for voter services, staffing, additional polling places, etc.)

Finally, by reducing the multi-year contract lock-in and the cost of altering the voting system, an open source model could open the door for kinds of election reform that are unfeasible today. For instance, an open platform that supports multiple vote-counting methods would offer the ability for San Francisco to move from one vote counting or ballot casting method to another with minimal switching cost.

WHAT IDEAS DO YOU HAVE FOR MAKING THE TAC MORE EFFECTIVE IN FULFILLING ITS DUTIES?

The key to the TAC being a productive and helpful addition to this process (as opposed to an unnecessary burden) is developing a simple and straightforward mission with clear deliverables. I would push the TAC to select 2-3 priorities (in consultation with the Commission) that it could take on for the first year. Directing the TAC's focus to a small set of capacities in which in can server exceedingly well will be more impactful than trying to take on a broad scope of responsibilities.

HAVE YOU REVIEWED THE TAC BYLAWS? DO YOU AGREE TO ABIDE BY THEM?

Yes, and yes.

Tyler Sax

Product Manager, Ad Quality @ FB

Summary

N/A

Experience

Product Manager at Facebook

June 2016 - Present

 Support an amazing team building the quality experiences that connect 1+ billion people to businesses every
 day in News Feed

Program Manger, Ads Integrity at Instagram

January 2015 - May 2016 (1 year 4 months)

 - Managed the development and launch of Instagram's Ads Integrity operations and technology stack

 - Led a cross-functional team in building the policies, ad review teams, automation, and advertiser messaging
 required to launch Instagram's global self-serve ads business in October 2016

Analyst + Developer, Community Operations at Facebook

June 2013 - January 2015 (1 year 7 months)

 - Conducted data analysis in order to predict and understand the bad experiences people have using Facebook

 - Identified and implement automation gains to help scale the support provided by the Community Operations
 team

 - Learned to develop on Facebook's technology stack by building internal productivity and workforce
 planning tools (PHP/Hack, SQL, React JS)

Student Managing Director

March 2012 - March 2013 (1 year)

 Helped build, then managed the day-to-day operation of a student-run $1.5 million fund that invests
 strategically in social ventures led by members of the Georgetown community

Web Developer at Application Developers Alliance

May 2012 - December 2012 (7 months)

 Helped overhaul the user experience for Alliance members by redesigning the website, analyzed user trends
 to determine optimal strategy for future development

Digital Strategist at No Labels

May 2011 - May 2012 (1 year)

Managed all web development, crafted messaging strategy, leveraged social media outlets and advertising campaigns in order to activate voters and advocate for more effective government

Education

Georgetown University

BS, Computer Science; BS, Political Economy, 2009 - 2013

9. Jim Soper

████████████
███
████████████████████████
██████████████
████████

1. Why do you want to be on the TAC?

I have been advocating open source election systems before the Elections Commission and elsewhere since 2005. I am delighted that San Francisco is moving forward with this very important project, and wish to be able to help.

2. What relevant skills and experience would you bring to the TAC?

- I have been a programmer for 35 years. I am not a security expert, but I do understand the issues. I have been complimented on the usability of the software I've written.

- I have been heavily involved in the election integrity movement for 12 years. I am familiar with the issues concerning accessibility, transparency, useability, testing, certification and costs. I have been lobbying extensively in Sacramento since 2009 for fair and accurate elections, so I am familiar with the laws, regulations, and procedures involved that will have to be addressed by any new voting system.

- My writing tends to be clear, and heavily footnoted. See CountedAsCast.org. I have established a very good reputation on Facebook and in EI elists. I am a moderator on several of them. This will help in advancing the project in Sacramento and across the country.

- I have been a professional trainer and teacher, and use those teaching skills to give presentations to the general public about election issues.

3. Why do you believe it is important for San Francisco to develop an open source voting system?

My biggest concern about election systems is security. Open source is the best defense against "Easter eggs", malware hidden inside the source code. No amount of testing will ever spot it, unless you know how to activate it, which only insiders do. I think what LA is building will probably be good, but I believe that San Francisco will come up with a system that is better, even more transparent, and at a lower cost to the counties. The California and the country need several good open source systems.

4. Have you reviewed the TAC's bylaws? Do you agree to abide by them?   Yes

ELECTION EXPERIENCE

Member, Voting Rights Task Force, 2005 to present
Co-Chair, Voting Rights Task Force, 2009 to present
Author, CountedAsCast.org, 2006 to present
Member, San Francisco Voting Systems Task Force, 2009-11

COMPUTER EXPERIENCE

1983-86 Digital Research, Monterey California
- Trainer
- Senior technical writer

1986-87 Intellicorp, Mountain View, California
- Quality assurance engineer

1987-89 Intellicorp, Munich, Germany
- Senior consultant, trainer, customer service & sales engineer

1989-94 Digital Equipment, European Technical Headquarters, Sophia-Antipolis, France
- Senior software consultant for artificial intelligence

1994-2012 Magin Software, Nice, France & San Francisco
- President & senior software engineer

2012-14, Sencha Inc, Redwood City
- Senior trainer for Sencha Touch (mobile apps) and ExtJS (web) libraries

Languages: Common LISP, JavaScript (with CSS & HTML), Sencha Touch, Sencha ExtJS, C#, Swift, Objective C, Pascal, BASIC, C

EDUCATION

BA (Psychology), Lawrence University, Appleton Wisconsin, 1971
MA (French), Middlebury College, Middlebury, Vermont, 1979

REFERENCES

David Marsland,
Training manager, Sencha Inc.
████████████

Dr. Barbara Simons,
Former IBM researcher, retired
Board chair, Verified Voting
On the Board of Advisors of the Election Assistance Commission
Former president of the Association for Computing Machinery (ACM)
████████████

10. Tony Wasserman

From: Tony Wasserman ████████████
Sent: Tuesday, May 9, 2017 8:08 AM
To: Commission, Elections (REG)
Subject: OSVSTAC application

Dear Commissioners:
I would like to be considered for a position on the Open Source Voting System Technical Advisory Council.
I have attached 3 PDF's:
1) the completed application, with answers to the six questions
2) the signed Application Acknowledgment Form
3) a current resumé, plus personal contact information and references.
Those references are

       Name Prof. Hakan Erdogmus
       Position Professor of Software Engineering
       Carnegie Mellon University-
       Silicon Valley
       Contact Information
       ████████████████████

       Name Patrick Masson
       Company Open Source Initiative
       Position General Manager
       Contact Information
       ████████████████

Please confirm receipt of this application.
Thanks.
Tony Wasserman

Open Source Voting System Technical Advisory Committee Application

████████████████████   ████████████

████████████████████████   ████████

████████████████   ████████████████

████████████   ████████████████████████████

Please respond to the following questions (either in this document or on a separate one):

1. Why do you want to be on the TAC?

I have long been involved with open source software, focused for the past 10-12 years on organizational evaluation and adoption of open source software. That includes evaluating open source projects, helping companies with open source project offices, and leading projects aimed at wider adoption of open source The TAC is a perfect opportunity for me to apply this knowledge and experience to bring open source voting into practice, initially in SF, but potentially elsewhere.

2. Please review Section 3 of the TAC Bylaws, and in particular the part describing the types of professic experience desired for TAC members. List all categories with which you have relevant professional experience. For each such category, provide an overview of your experience, including your number of y of experience.

Software engineering (including contributing to open source software projects)
      Many years of relevant experience, including executive and engineering management for proprietary software products (Software through Pictures, evolved to openameos.org), e-commerce (BestOffer.com), and Total-e-Mobile from Bluestone Software. Founder of open source OSSpal project (osspal.org). Githu ID: twasserman

User experience (UX) or human-computer interaction (HCI)
      Creator of User Software Engineering project, an early effort to include rapid prototyping of user interfaces in an iterative software development process, a technique that has become standard among developers

Project management of software projects
       VP, Director, and manager level oversight of various projects

3. What relevant skills and experience would you bring to the TAC?

My strengths lie in management of modern software development processes, e.g., agile methods such as Scrum, along with experience in assessing proposals and open source projects.

4. Why do you believe it is important for San Francisco to develop an open source voting
   system?

The people of San Francisco, as much as any city, have the technical knowledge needed to design and implement a complex and closely watched open source project. The population is knowledgeable about the issues of transparency and privacy that are fundamental to creating an open solution. We are in the best position to show other cities that open source voting is a feasible and achievable goal.

5. What ideas do you have for making the TAC more effective in fulfilling its duties?

The ability to monitor and report to the Elections Commission upon contractor work-in-progress after the contract(s) have been issued. This could include raising areas of concern, reviewing source code, and serving as early testers/users of the evolving application

6. Have you reviewed the TAC's bylaws? Do you agree to abide by them? Yes

ANTHONY I. WASSERMAN

████████████
████████████████
██████████
███████████████

Education

Ph.D., M.S. (Computer Sciences)   University of Wisconsin – Madison
A.B. (Mathematics and Physics)   University of California, Berkeley

Recent Employment History

2005 – present

Carnegie Mellon University Silicon Valley

Professor of Software Management Practice, Integrated Innovation Institute, and Executive Director, Center for Open Source Investigation

Faculty member in M.S. program in Software Management. Developed and taught courses on The Business of Software, Software Product Definition, Software Product Strategy, the Mobile Ecosystem, Open Source Software, Cloud Computing, and The First Time Manager. Led reorganization of Software Management (SM) curriculum (2007). Committee Member for VentureBridge (2015 -). Established the Center for Open Source Innovation (COSI) at Carnegie Mellon Silicon Valley as a research center on evaluation and adoption of open source software (2005 -). Co-founded the community-based Business Readiness Rating (BRR) project (renamed OSSpal). External research support from IBM, Google, HP, Intel.

1997 – 2000, 2002 – present

Software Methods and Tools

Consulting practice with focus on software product development, open source, and software development processes and tools. Executive consulting on business strategy and development. Due diligence for venture capital firms. Advisor to software startups. Board member: mVerify, Inc. (2002-10). Served as interim VP of Product Development for angel-funded software startup. Executive Advisory Board: CollabNet (2013). Board of Advisors: White Source Software (2014-present), Thinking Software (2014-present).

2000 -- 2002

Bluestone Software (acquired by Hewlett-Packard)

Director, Mobile Middleware Lab, Hewlett-Packard (January 2001 – August, 2002)
VP, West Coast Labs, Bluestone Software (April, 2000 – January, 2001)

Led design of standards-based Mobile Web Services Delivery Platform, supporting multi-device access to portal framework built on Java 2 Enterprise Edition (J2EE) platform and related Java and web services standards. Led design and development of award-winning Total-e-Mobile™ , revised as Mobile Toolkit for HP Application Server, released in source code format. Recruited, hired, and managed development team. Collaborated with HP Labs team on mobile agents project. Created and managed departmental budgets. Bluestone acquired by H-P, Jan., 2001; H-P terminated Middleware Division, August, 2002.

1999 -- 2000

BestOffer.com

Vice President of Engineering

Oversaw design and development of a complex e-commerce web site. Responsible for all site infrastructure selection and operation, including acquisition and configuration of equipment, co-location selection, web site logging analysis, and scalability planning.

1983 – 1996

Interactive Development Environments, Inc. (IDE)

President and CEO (1983 - 1993), Chairman (1983 – 1996)

Founder and CEO of industry-leading computer-aided software engineering (CASE) company. Conceived and architected IDE's innovative Software through Pictures (StP) integrated multi-user software modeling environment. Responsible for day-to-day management until June, 1993 (200 employees, $25 M revenue). Closed round of top-tier venture funding. Participated in customer sales opportunities. Established international subsidiaries and distributors. IDE was one of the first 100 dot-com domains and among the first companies to embed open source software in a commercial product.

1971– 1988

University of California, San Francisco

Professor of Medical Information Science (Lecturer 1971-2, Asst. Prof. 1972-78, Assoc. Prof, 1978-83)

Developed and taught graduate level computer science courses (database management, information structures, computer systems, and software engineering) in UCSF Ph.D program. Vice Chair, 1981-2. Acting Chair, 1982. Research on software development tools and methods, emphasizing interactive information systems. Created User Software Engineering methodology and multi-tier environment, including rapid prototyping tools and relational DBMS released under BSD open source license (1980). Supervised M.S. and Ph.D research. External research support from National Library of Medicine, National Science Foundation, National Institute of Science and Technology, and NEC Corporation.

1970 – 1987, 1996

University of California, Berkeley (except 1971-2)

Lecturer, Computer Science Division

Taught upper-division and graduate courses, including data structures, operating systems, programming language design, security and privacy, and software engineering. Supervised M.S. projects.

Honors

Influential Educator Award, ACM Special Interest Group on Software Engineering (SIGSOFT), 2013

Distinguished Educator Award, IEEE Technical Council on Software Engineering, 2012

ACM Fellow, inducted 1996

IEEE Fellow, inducted 1996; Life Fellow since 2011

"For contributions to software engineering, including the development of computer-aided software engineering tools"

ACM SIGSOFT Distinguished Service Award, first recipient, 1995
Awarded for lifetime contribution to the software engineering community
Stevens Award, first recipient, 1995
Awarded for contributions to software development methodologies

IFIP Silver Core Award, 1986

Professional Affiliations and Service

Association for Computing Machinery. Member (1966-1995), Fellow (1996 -), Editor-in-Chief, *Computing Surveys* (1983-6), Associate Editor (1981-3). Chairman, *SIGSOFT*, 1976-9, Executive Committee (1979-89, 1993-7?), Software Engineering Education Project (1998-2000), ACM National Lecturer (1972-4).

Institute of Electrical and Electronic Engineers. Member (1971-1994), Senior Member (1994-1996), Fellow (1996 – 2010), Life Fellow (2011 -), Member, Executive Committee, IEEE TC on Software Engineering (1976-1986?)

Member, Board of Directors, Open Source Initiative, 2010 – 2016

International Federation of Information Processing. Member, Working Group 8.1 (Design and Evaluation of Information Systems) (1977-present); Vice Chairman (1995-1998). Member, Working Group 2.13 (Open Source Software) (2006-), Vice Chair (2012-2015), Chair (2015-)

Recent Speaking (Partial List)

The First Time Manager, DevNation 2017
Community and Commercial Strategies in Open Source Software (Keynote), Korea Copyright Commission Open Source Insight Int'l Conference, Seoul, Nov. 2015
Barriers and Pathways to Successful Collaboration, Invited Keynote, OpenSym 2015, San Francisco, August 2015
The Challenges of Universal Connectivity (Keynote), MobileSoft 2015, Florence, Italy, May 2015.
The Challenges of Universal Connectivity (Keynote), Int'l Forum on Mobile Technology and Applications, Hong Kong, Dec., 2014
Startups and Requirements (Keynote), RE'14 (22nd IEEE International Requirements Engineering Conference), Karlskrona, Sweden, August, 2014.
Open Source Software in a Proprietary Software Company (Keynote), 10th Qualcomm Open Source Systems Conference, San Diego, May, 2014
The Rise of Free and Open Source Software (Keynote), UCIENCIA, Universidad de Ciencias Informaticas, Havana, April, 2014
Tutorial: Open Source for Cloud Computing and Practices, IEEE Cloud/Services Conference, June, 2013
Low Ceremony Processes for Short Lifecycle Projects (Keynote), International Conference on Software and Systems Process, San Francisco, May, 2013
The Rise of Free and Open Source Software (Keynote), ICSEMA Conference, Chennai, 2012
How the Internet Transformed the Software Industry (Keynote Talk), Int'l Conference on Open Systems, Kuala Lumpur, 2012

Selected Publications

Refereed and Reviewed Papers

Wasserman, A.I., "Low Ceremony Processes for Short Lifecycle Processes," in *Software Process Management*, ed. M. Kuhrmann *et al.*, Springer Verlag, 2016 (in press)

Wasserman, A.I., "Community and Commercial Strategies in Open Source Software", *IT- Information Technology*, vol. 55, no. 5 (2013), pp. 181-188.

Wasserman, A.I., "How the Internet Transformed the Software Industry," *Journal of Internet Services and Applications*," vol. 2, no. 1 (2011), 11-22.

Capra, Eugenio, and Wasserman, A.I., "A Framework for Evaluating Managerial Styles in Open Source Projects", Proc. 4th Int'l. Conference on Open Source Systems, 2008, pp. 1-11.

Wasserman, A.I., and E. Capra, "Evaluating Software Engineering Processes in Community and Commercial Open Source Projects,", Proceedings of First International Workshop on Emerging Trends in FLOSS Research and Development, Minneapolis, MN, May, 2007.

Wasserman, A.I. and P.A. Pircher, "A Graphical, Extensible Integrated Environment for Software Development," *ACM SIGPLAN Notices*, vol. 22, no. 1 (January, 1987), pp. 131-142. (Proc. ACM SIGSOFT/SIGPLAN Symposium on Practical Software Development Environments)

Wasserman, A.I., P.A. Pircher, D.T. Shewmake, and M.L. Kersten, "Developing Interactive Information Systems with the User Software Engineering Methodology," *IEEE Transactions on Software Engineering*, vol. SE-12, no. 2 (February, 1986), pp. 326-345.

Freeman, P. , A. I. Wasserman , R.E. Fairley, "Essential elements of software engineering education," Proc. 5th Int'l. Conf. on Software Engineering, San Francisco, 1976, pp.116-122.

Other Papers (partial list)

Wasserman, A.I., "Software Engineering Issues for Mobile Application Development," Proc. Workshop on Future of Software Engineering Research, 2010. Available at http://www.cmu.edu/silicon-valley/wmse/wasserman-foser2010.pdf

Wasserman, A.I., "Building a Business on Open Source Software" in Petti, C. (ed.), *Cases in Technological Entrepreneurship: Converting Ideas into Value*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar, 2009, pp. 107-121.

Wasserman, A.I., "Software Tools: Past, Present, and Future," *Proc. Int'l. Conf. on Software Methods and Tools (SMT 2000)*, Wollongong, Australia, 2000, pp. 3-6.

Wasserman, A.I., "Tool Integration in Software Engineering Environments," in *Software Engineering Environments*, ed. F. Long. Berlin: Springer Verlag, 1990, pp. 137-149. (Lecture Notes in Computer Science, no. 467)

Edited Books

Damiani, E., Frati, F., Riehle, D. and Wasserman, A.I. *Open Source Systems: Adoption and Impact*, IFIP Advances in Information and Communication Technology, Heidelberg: Springer Verlag, 2015

Corral**, **L.**, **Sillitti**, **A.**, **Succi**, **G.**, **Vlasenko**, **J.**, **Wasserman**, **A.I. (Eds.), *Open Source Software: Mobile Open Source Technologies*, IFIP Advances in Information and Communication Technology, Vol. 427, Heidelberg: Springer Verlag, 2014

Boldyreff, C., K. Crowston, B. Lundell, and A.I Wasserman (eds.), *Open Source Ecosystems: Diverse Communities Interacting*, IFIP Advances in Information and Communication Technology, Vol. 299, Heidelberg: Springer Verlag, 2009.

Freeman, P. and A.I. Wasserman (eds.) *Tutorial: Software Design Techniques*. Los Alamitos: IEEE Computer Society, 4th ed., 1983.