



2018



OSET
INSTITUTE

The Year in Review

Recapping year 11 of the Institute's work to design and develop more secure, lower cost, and easier to use publicly available voting technology to increase confidence in elections and their outcomes, and defend democracy worldwide.

Palo Alto, California USA

Results for our Stakeholders

Ontario, Canada

Established a set of design guidelines and principles for next generation voter services personalization including support for digital identity.

Pennsylvania, USA

Rolled-out pure paperless mobile online voter registration service including data and network integration.

Rock The Vote

Enhanced and extended the Rocky online voter registration platform capabilities including electronic signature capture and support for printer-less registration.

Virginia, USA

Enhanced 3rd party online voter registration technology platform including extensive security review for NIST SP 800-53 security controls compliance.

Results for the Institute

In 2018 the OSET Institute became a publicly recognized subject matter expert in election cybersecurity, including a 2-year collaboration with NBC News; work with several media companies; a potential election security event collaboration with POLITICO; an opportunity to provide subject matter expertise to the Transatlantic Commission on Election Integrity; collaboration opportunities with the Democratic National Institute and International Republican Institute; real work with Elections Ontario, Canada; and the start of several alliances with Fortune 500 technology companies all generating support commitments totaling in excess of a half million dollars—an increase of 150% from the previous year.

To Our Supporters, Stakeholders, and Staff

Looking back at 2018 results, it's clear that our strategy of advancing the cause of public election technology infrastructure as matters of national security and defending democracy is producing actionable results.

Two of our leadership team continued to provide consultative services to organizations of the national security community including production of significant work products, in some cases on a confidential basis. At the same time, we increased our activity with Board Advisor **William “Bill” Crowell**, former Deputy Director of the NSA, on several of our initiatives and substantially benefited from his insights and suggestions. In addition, Mr. Crowell is assisting in engaging additional key national defense and security leaders in the cause of the OSET Institute, believing as we do that such individuals will expand the visibility of our mission.

This year brought a significant amount of work with the Media, thereby enabling us to raise the level of conversation about election technology as critical infrastructure and a matter of national security, which followed on from our 2017 CDI Briefing. We invested considerable time in discussion and education of cybersecurity journalists from AXIOS, CNN, CBS 60 Minutes, NBC News, NPR, PBS, POLITICO, and other smaller specialty publications.

In 2018 we also continued our investment in government relations work, which led to the Institute being called upon to advise and comment on several pieces of legislation and potential legislative initiatives on election infrastructure development and security.

2018 also brought us two extraordinary individuals that dramatically bolstered our capabilities. At the Board level, the venerable Silicon Valley visionary and co-founder of Sun Microsystems, **John Gage** joined our Board of Directors. And at the leadership level the Institute was blessed to have the Director of Product Development, **Eddie Perez** for voting systems vendor Hart Intercivic join as our *Global Director of Technology Development*. It was also a banner year in new volunteer and paid staff joining the Core Team at the TrustTheVote Project as well as on the operational side of the house bringing the total number of individuals involved with the Institute to nearly 60.

Candidly, our philanthropic fund raising for our most urgent mission to deliver a finished publicly available voting system qualifying for certification, is behind schedule. However, we believe this year's accomplishments will significantly raise the visibility of our work in 2019 to finally secure that funding. Despite the financial distraction of the midterms, we nevertheless continued to generate support for our work, this year exceeding \$250,000 of gifts and grants. With the 2020 election looming, the time is now to position the Institute to deliver on its mission of developing and delivering new public voting technology in 2019/2020.

On the following pages you will find a recap of this year's activities. We appreciate your continued support of the OSET Institute and TrustTheVote Project, and its imperative mission.

Respectfully,

Gregory A. Miller
Co-Founder & Chief Operating Officer

& 
E. John Sebes
Co-Founder & Chief Technology Officer

2018 Highlights — Technology

ElectOS™

The heart and soul of the OSET Institute is technology—the software to drive a next generation of more verifiable, accurate, secure, and transparent voting and election administration systems. Our work proceeded, albeit at a slower pace than we need on various aspects of the **ElectOS** voting system, primarily with work on a *Ballot Marking Device*, led by senior technical architect **Bret Schuhmacher**. There was also important work on the security lynch pin called the *Device Manager*, which involves the concepts of “*trusted boot*” and “*hardware attestation*” led by our co-founder and CTO **John Sebes** in collaboration with a stealth Silicon Valley start-up, **Blastwave**.

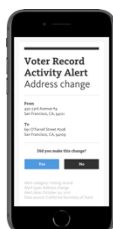


The TrustTheVote™ Project team completed several upgrades to the online voter registration platform called Rocky in its continuing technology alliance with **Rock The Vote**. Support for electronic signature was but one of several innovations. The team performed extensive security audit and enhancements to bring the technology into NIST SP 800-53 compliance—the first open source election administration technology in the world to have such an audit, assessment, and compliance review. Complete online, mobile, paperless voter registration capabilities were engineered in and deployed in Pennsylvania and Virginia for 3rd party registrars.



The OSET Institute was one of the few organizations engaged in election technology innovation to advocate for responsible use of Blockchain technology. Rather than ill-advised ballot casting and counting, we called for the application of immutable ledger technology to fortify voter registration rolls. Thus, was born our newest technology initiative, and adjunct technology to ElectOS called **Vanadium™**.

VoteReady™



In late 2017 the OSET Institute completed a deep analysis of the US E.A.C. 2016 EAVS data discovering that millions of voter registrations were denied or removed—without reason. Thus, VoteReady was conceived: a technology that alerts your mobile device any time there is a change to your voter record. Think, “*LifeLock for your voter registration data.*” The VoteReady project is now subject of a crowd-funding initiative launching at year-end to build the technology for 2020. See: bit.ly/OSETvrp

2018 Highlights — Team

Staff



The Institute recruited and acquired several talented contributors in 2018 bringing the headcount to nearly 60. We added 6 staff to our operations. **Abraham “Abe” Friedman** joined the OSET Institute as a *Senior Election Security Policy Analyst*. He is producing a weekly commentary on global election administration related news and developments. Abe holds his Masters degree from Tel Aviv University in International Security. He most recently was a research analyst for the prominent Israeli national security think tank, the Institute for National Security Studies in Tel Aviv. **Neil Johnson**, a veteran web developer, joined as *Director of Web Engineering* and is leading all of the work to evolve and expand our Web properties with a goal of migrating osetfoundation.org to oset-institute.org in 2019.

Advisory & Board

This year we officially brought aboard 3 new strategic board advisors: **William P. Crowell** who is providing important input to a broad range of aspects of the Institute’s operation; **Dr. Rich DeMillo** who is also providing advice on a range of topics, but primarily technical; and fellow Netscape Communications alumni **Deepak Puri** who has been instrumental in advising on several corporate development initiatives. In March, we were delighted to welcome co-founder of Sun Microsystems and Silicon Valley sage **John Gage** to our Board of Directors.

Leadership

Our Leadership, as we use that term, includes those executive-level individuals charged with significant responsibility for the mission of the Institute. One such position is the *Global Director of Technology Development*—the consummate “VP of Product Management” in the commercial world. That position, reporting to the CTO has been open for some time, waiting for the right person. So, a gift of human and intellectual capital was bestowed on the Institute in 2018 with the arrival of **Eddie Perez** from voting systems vendor Hart-Intercivic to assume that position—the equivalent role he held at Hart for over 15 years. Nobody knows the business and technology of voting systems like Eddie. His arrival is game changing; his impact has been immediate and positive. We welcome Mr. Perez to the team and family.



2018 Highlights — Corporate Development



Alliances & Collaborations

In 2018 the Institute continued to expand its alliances with academia and organizations with common missions to defend democracy and started a unique corporate collaboration program. This builds on our existing relationships such as **Amazon Web Services**. AWS has been considerably pro-active in developing our 3-year old corporate alliance and that relationship is expanding. As the year closes the Institute is in active discussions with several Fortune 500 technology companies.

Two global technology firms in particular approached the Institute about opportunities to work together on Blockchain technology initiatives such as Vanadium (*see Page 5*): **Accenture** and **DXC Technology**.

OSET Institute leadership is optimistic that corporate collaboration, partnership, and sponsorship can provide another means to enable completion of the ElectOS voting system components by 2020.

International Development

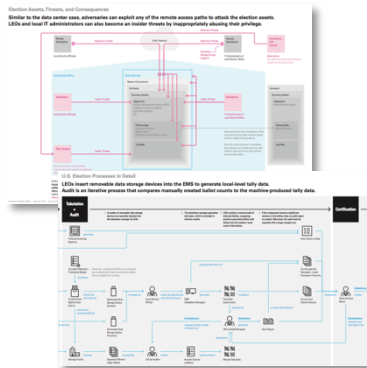
From the beginning, the OSET Institute has recognized its mission must be *global*—defense of democracy is not limited to the US. Our research and development collaboration with Ontario, Canada formed in 2017, made significant headway this year.

This year we saw global interest and visibility in our work grow. Notably, the Institute was invited and **Joy London**, *Associate General Counsel and Director of International Development*, attended a gathering of 250 democracy thought leaders in Copenhagen at the *Global Democracy Summit*. The Institute was also invited to the *World Government Summit* in Dubai, and hopes to attend in 2019.

The Institute has also been working with IFES, and other international election advocates on initiatives in **Libya**, **Armenia**, **Georgia**, and **Kenya**.

And 40% of our monthly inquiries continue to come from abroad. With proper financial support there is no doubt that our public technology development work can benefit democracies worldwide.

2018 Highlights — Government Relations



Administration

2018 began with a growing understanding by the Administration of the extent to which foreign adversaries are attempting to interfere with America's sovereign right to free and fair elections. OSET leadership continued its work with various agencies of national security, including the US DHS. That work included a significant undertaking to provide a detailed and extensive threat model for US election technology and administration infrastructure. This resulted in substantial confidential work, including, but not limited to, visual models, diagrams, and schematics that now serve as a basis for new developing educational materials for the Institute's applications elsewhere.

Congress

Meanwhile, the OSET Institute continued to work with individual members and various committees of Congress in both the House and Senate. Given that the Institute is not (*and cannot be*) any sort of a lobbying agent, Congress welcomes the OSET Institute as a subject matter expert. Following our facilitating a rare Congressional bipartisan briefing in late 2017 on long term matters (*e.g., supply chain issues, inherent structural technology vulnerabilities, etc.*), we continued to provide input, analysis, advice, and comment on several legislative initiatives.

International

Certainly, a hallmark event was our attendance and participation in the *Global Democracy Summit* in Copenhagen. This accelerated an emerging interest in the work of the Institute that began at the 2017 XPRIZE Summit where members of our leadership and advisory board attended and catalyzed a discussion about defending democracy. One significant outcome has been the opportunity to brief Commissioners of the *Transatlantic Commission on Electoral Integrity* (TCEI) including former US Ambassador **Eileen Donahoe**, former DHS Secretary **Michael Chertoff** and former Estonia President **Toomas Hendrik Ilves**. We've subsequently received invitations to brief Parliaments of EU nations, and attend the *World Government Summit* in Dubai in February 2019.



2018 Highlights — Media

Exposure

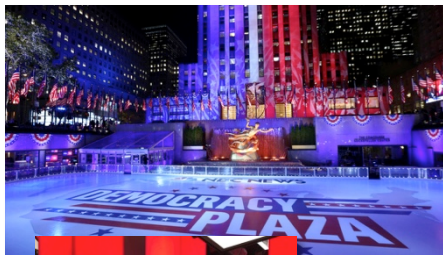


2018 was our best year yet with an estimated 60 media “impressions” including several print, radio, and television appearances by members of our leadership team. Although many of these were brief interviews and “sound bites” they enabled us to continue raising awareness with the public about the moral imperative of increasing security, lowering costs, and improving usability of election technology as a matter of national security and defense of democracy. While 2019 would normally be slower in coverage of election technology issues, given the change in Congress and the lingering issues of the 2018 midterms, the Institute anticipates a higher than usual amount of coverage in a non-election year, starting with H.R.1 in the 116th Congress this coming January, 2019.

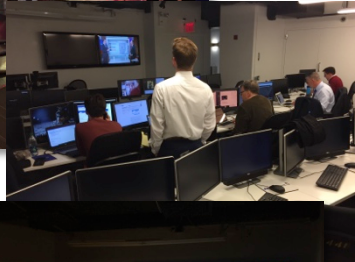


Collaborations & Partnerships

2018 also delivered a couple of important media partnerships, where our subject matter expertise can be used to help educate the public about the issues of trustworthy elections.



The most important to the Institute strategically is our **NBC News** collaboration where three of our leadership are available to serve as qualified “*Election Technology & Security Analysts*” and we supplied a team of 8 in support of this year’s midterm election coverage for NBC. NBC has contractually engaged us on a *first-right-of-refusal* for the 2020 election. Much of the data, analysis, visual content and technology we provided to NBC in 2018 served as a “dry-run” for planned applications in the 2020 Presidential election where much more is anticipated to be at risk and at stake.



Meanwhile, with our commitment to become a POLITICO-PRO subscriber, **POLITICO** —the leading media company on all things politics in the US and increasingly abroad— had the opportunity to learn more about the Institute and our subject matter expertise. We’ve had good editorial conversations with members of the POLITICO team covering cybersecurity and election technology. A great mutual opportunity emerged as a consequence, and the OSET Institute and POLITICO are in discussions about a 2019 event to bring together the best and brightest to discuss how to innovate election technology and address a much-needed major nationwide election technology overhaul.



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