November 9, 2016

President-Elect Donald J. Trump
1717 Pennsylvania Ave NW
Washington, DC 20006

Mr. President-Elect:

Congratulations on your election as the 45th President of the United States. SIIA and our member companies look forward to working with you and your Administration to support the use of software and information technology to foster inclusive growth for all Americans.

As you work with your transition team to outline the roles and responsibilities of the key Administration officials who will implement the policies you outlined in your campaign, I wanted to share with you our detailed domestic and international recommendations for technology policy, intellectual property protection, and education technology.

These recommendations will be a useful roadmap for policymakers throughout your new Administration, enabling them to promote software and information technology to create broad-based growth, reduce social and economic inequality, and secure America’s global leadership.

To accomplish these goals, I urge you to focus on data-driven innovation at the highest levels of your Administration by vesting significant data policy-making responsibility in senior positions in the White House. Managing the data-driven innovation portfolio as a strategic cross-cutting issue at the White House will enable the Administration to effectively govern the use of data to protect and better serve the American people.

I would be pleased to meet with you and others to discuss these recommendations further.

Sincerely,

Ken Wasch
President & CEO
Software & Information Industry Association
SIIA Policy Recommendations to the New Administration and Congress
Technology Policy that Advances U.S. Economic Leadership

The members of the Software & Information Industry Association (SIIA) - providers of data and information services and providers of software and analytics services – are the leading innovators and job creators of the 21st Century global economy. Cooperative exchanges among these data and analytics companies create increasing gains for everyone. As more data becomes available, the analytics techniques brought to bear on this data produce better and more useful insights for business, education, health care and government. In turn, as data becomes more valuable as a source of novel and actionable insights the incentive increases to collect information and make it available for analysis.

These companies – and policymakers around the globe - need to work together to maintain and intensify this virtuous cycle.

SIIA urges the new Administration and Congress to look for measures that promote the availability of data and the development of improved analytics techniques to extract value from information. In an increasingly information-based global economy, data and analytics are the keys to job growth, value creation, improvements in labor productivity, increased global competitiveness of U.S. companies, accelerating economic growth and new ways to combat inequality, poverty and wage stagnation.

To accomplish these objectives, SIIA offers the following policy recommendations.

Technology Policies that Promote the Use of Data and Analytics While Protecting Privacy and Data Security.

Privacy and security are affirmed as human rights in the U.S. legal system, and those of successful democracies around the world. Effective privacy and security protections also provide economic advantages for the data economy, because they promote trust. Rules that protect people from harmful uses of information encourage the trusted disclosure of the information that is the fundamental input into data-driven innovation. The new Administration and Congress should work collaboratively with the regulatory agencies to further institutionalize their time-tested enforcement of current policies.

Intellectual Property Protection to Foster Innovation and Entrepreneurship.

Strong and flexible intellectual property laws provide the incentives needed for innovation and entrepreneurship. In doing so, they are the foundation of our national achievements in innovation, and models for the rest of the world. The new Administration and Congress should continue and expand efforts at the Patent and Trademark Office (PTO) to improve the quality of patents and should work with Congress to ensure carefully crafted balances in our copyright laws, which create the flexibility and strong protections necessary for innovation and creativity.
International Policy to Promote U.S. Leadership in Technology and Innovation.

An open, integrated global economy promotes strong, sustainable, balanced, and inclusive growth – which directly benefits U.S. companies and workers. With so many U.S. companies managing and relying on global business networks, effective and flexible security, and intellectual property laws are essential in other countries. The new Administration should use every diplomatic tool at its disposal to seek such laws, particularly among our most significant investment and trading partners – the European Union, China, Japan and India. The new Administration should continue to stand for the free flow of information, ideas, and knowledge across borders and oppose policies like forced localization that fragment global networks. They can do this by promoting cross border data flows throughout the world, influencing other countries to advance national policy objectives in a way that imposes the fewest restrictions on the ability of global companies to transfer information.

Education Policies that Promote an Adaptable 21st Century Workforce.

Tomorrow’s workplace will challenge workers to race against increasingly smart machines, more and more capable of performing tasks that were previously performed by people. A highly-skilled, adaptable, workforce is essential to drive the 21st century economy. To meet the needs of the modern workplace, the new Administration and Congress should seek policies that bring the U.S. education and training pipeline in line with the demands of today’s employers in a global economy. Data-driven advances in education technology have enabled personalized learning, identification of teaching best practices, evaluation of instructional content, and the early identification of students at risk. These technologies promise to reduce educational inequalities and improve learning for all. New models for learning, including online education and innovative partnerships between universities and the private sector, are also enhancing access and return on investment for students. The new Administration and Congress should seek ways to promote the continued use of new technology and delivery models to improve education, including through expanded broadband access for education.

About SIIA: The Software & Information Industry Association (SIIA) is an umbrella association representing 800+ technology, data, and media companies globally. Industry leaders work through SIIA’s divisions to address issues and challenges that impact their industry segments with the goal of driving innovation and growth for the industry and each member company. This is accomplished through in-person and online business development opportunities, peer networking, corporate education, intellectual property protection, and government relations. For more information, visit siia.net.
Technology Policies that Promote the Use of Data and Analytics

Privacy and security are both fundamental pillars for continued growth of data-driven innovation. Without trust, there cannot be significant progress through innovation; and without adequate privacy and security protections, there can be no trust. Policymakers must recognize the following priorities to promote an effective framework for privacy and cybersecurity.

Maintain Privacy Protections that Prevent Harm and Promote Innovation. As technologies evolve to become more personalized and instrumental in all facets of our lives, social norms and expectations about the flow of information and privacy also evolve along with user experiences. Frameworks for privacy policy should remain sufficiently flexible to encourage continued data-driven innovation and accommodate evolving user expectations, while preserving privacy. SIIA recommends the following:

- Maintain support for the current U.S. sectoral approach to privacy, where protections are based on the sensitivity of data and the risk of significant harms.
- Promote multi-stakeholder discussions to develop voluntary and enforceable industry codes of conduct that can evolve with technology.
- Maintain policies that protect the public’s right of access to public records and public domain data, including access to government information under FOIA, without imposition of artificial limits on access based on unwarranted privacy claims.
- Use flexible guideposts for implementing targeted privacy regulations to prevent harm, adhering to these key Guidelines for Policymakers, rather than seeking to develop a uniform, comprehensive consumer privacy framework.

Promote Flexible, Risk-based Cybersecurity Practices. We all recognize that our country’s national and economic security depends on strong cybersecurity protections, including but not limited to the reliable function of critical infrastructure. Despite this, cyber threats continue to increase at a dramatic pace. Effective cybersecurity risk-management is imperative for all organizations, both public and private. Additionally, effective authentication techniques and the ability to combat online fraud are both critical cybersecurity objectives to ensure continued success of the digital economy. It is the role of the Federal Government to ensure that that individuals and organizations—both public and private—have the knowledge and the incentive to manage their own cybersecurity risks. SIIA recommends the following:

- Maintain and expand the partnership between the private sector and the government to address our collective cybersecurity challenges.
- Promote a flexible, voluntary approach to developing cybersecurity best practices, consistent with the efforts identified by the NIST Cybersecurity Framework.
- Support NIST’s continued leadership in the governance of the Cybersecurity Framework, and their leadership in sharing of information, practices, and industry resources.
- Promote initiatives and policies focused on authentication techniques, voluntary policies and practices to prevent fraud and identity theft. The new administration should engage the private sector in building public private partnerships, where possible, to maximize effectiveness of these efforts, such as the 2016 IRS Security Summit. Promote the National Initiative for Cybersecurity
Promote an Effective Legal Framework for Government Access to Information. Today, U.S. companies face conflicting legal obligations from the U.S. and foreign governments pertaining to law enforcement and intelligence agency access to electronic data. At the same time, law enforcement officials around the world, including in the U.S., are challenged by the outdated legal framework of the cumbersome Mutual Legal Assistance Treaty (MLAT) process.

In the new data-driven economy, policy updates are needed to create an effective framework for U.S. businesses to continue as global leaders and to balance the rights of citizens with the ability for law enforcement to do its job effectively. SIIA recommends the following:

- Update the Electronic Communications Privacy Act (ECPA) to establish a warrant requirement for law enforcement access to remotely stored communications.
- Promote policies that recognize government access to data should be based on the location of the data subject and the crime, not the location of the data.
- Update/Reform the MLAT process to ensure that law enforcement maintains efficient access to communications of foreign citizens in very limited circumstances, consistent with international law.
- Enact legislation facilitating bilateral law enforcement sharing agreements that give foreign governments the ability to require data held by U.S. firms on foreign nationals on a due process basis.

Foster an Ongoing Industry-Government Dialogue On the Challenges and Benefits of Technology to Law Enforcement. Law enforcement access to information held by providers under appropriate due process is a common and well understood practice in the technology industry, critical to keeping the public safe. However, strong encryption is essential for: user privacy; data security; cyber security in a national security and crime prevention capacity; and the promotion of global commerce. Broad policy requirements for government access to secure systems would undermine the very safety and security they seek.

Managing the challenge and benefits of strong encryption demands a thoughtful and deliberate response, including education on technology and innovation on law enforcement tools. It is therefore a critical priority to maintain an ongoing dialogue between technologists, security experts, industry representatives, law enforcement and national security leaders.

Support Collaborative Initiatives to Advance Scientific Research. Providing access to validated research findings is a shared responsibility of researchers and publishers, and collaborative solutions must be found to ensure the continued sustainability of the scholarly communications ecosystem. Policymakers should support and encourage collaborative, data-driven approaches and public-private partnerships to implement policies that will advance access to research literature while ensuring the continued availability and integrity of the scholarly record, and make sure that they do not conflict with national policies or unduly burden the researchers or research communication ecosystem. A one-size-fits-all policy that undermines sustainability and quality is not the right approach for the advancement of science and innovation across a wide range of disparate disciplines.
**Encourage Responsibility in Algorithmic Decision-making.** Scoring models, algorithms, artificial intelligence and machine learning all use big data sets to solve hard problems from developing new medicines to evaluating credit risk. We have a strong set of laws to ensure fairness in these decision-making systems when they might lead to consumer harm, such as in decisions about credit, employment, housing, insurance and other benefits that are often essential to personal success. These laws include the Fair Credit Reporting Act, Title VII of the Civil Rights Act of 1964, the Equal Credit Opportunity Act, Title VIII of the Civil Rights Act of 1968, the Fair Housing Act, the Age Discrimination in Employment Act of 1967 and the Genetic Information Nondiscrimination Act of 2008. These laws are appropriately situated to address concerns at the intersection of algorithmic decision-making and fairness.
International Policy to Promote U.S. Leadership in Technology and Innovation

In the increasingly fast-moving, diverse and global economy, there are several critical policy priorities that will allow U.S. businesses to continue leading the world, including the following: open cross-border data flows; innovation-friendly privacy law in foreign countries; voluntary approaches to cybersecurity; and limits on law enforcement/national security access to information without due process.

Promote Cross-Border Data Flows. Permission to send data to other countries should continue to be a fundamental tenet of U.S. foreign economic policy. Numerous studies have documented the economic importance of cross-border data flows including one by ITC. Further examination of this issues can be found in SIIA testimony, Brookings report, and McKinsey report.

Countries must have systems that permit data to leave their borders as long as the data exporter complies with its national laws. Therefore, flexible inter-operability mechanisms that allow for cross-border data flows must be available. Small and Medium-sized Enterprises (SMEs), in particular, have limited compliance staff, so these mechanisms should be as user-friendly as possible. Enforcement resources, principles agreements, and USG institutional strengthening should also be used to promote cross-border data flows. SIIA recommends the following:

- Promote the groundbreaking cross-border data flow provisions in the Trans-Pacific Partnership (TPP). These provisions prohibit domestic rules that require storage of data or location of computer facilities in a country as a condition of doing business there. International acceptance of these provisions would be a powerful tool in making cross-border data flows the norm in international trade.
- Incorporate 21st Century cross-border data flow provisions into other international agreements such as in the Transatlantic Trade and Investment Partnership (TTIP) and the Trade in Services Agreement (TISA). USTR should also urge the WTO to adopt these provisions in their upcoming work on digital trade/ecommerce (also see last bullet). Further, USTR should investigate where our trading partners have cross-border data flow restrictions and assess the extent to which these data flow restrictions are impeding digital trade and issue a public report of its findings. Explore enforcement opportunities under existing trade agreements against countries blocking data flows.
- Ensure that the EU-U.S. Privacy Shield is successful. This will require continued “whole-of-government” (including from national security and law enforcement) high-level attention.
- Promote wider adoption of APEC’s cross-border privacy rules and continue to develop the APEC “referential.” The referential tells companies what privacy-related measures are consistent both EU and APEC rules. Work should continue towards interoperability across national and regional policy/regulatory requirements.
- Double-down on the Global Connect Initiative. USAID provides technical telecom regulatory assistance in this context. USAID should offer technical privacy regulatory assistance as well in order to stimulate demand for broadband.
- Engage in multistakeholder-informed dialogues with interested countries on the most appropriate inter-operability mechanisms. This could involve model contracts, binding corporate rules, certification by third parties, a privacy shield type mechanism, adequacy determinations, APEC rules, etc.
• Update the 2011 EU-US ICT Principles for ICT Services to include a provision prohibiting requirements to reveal source code and algorithms should be considered legitimate intellectual property. Principles agreements should be pursued with other countries as well.
• Create a dedicated Digital Program. The Digital Attaché Program should be formalized along the lines of the Intellectual Property Rights Attaché program authorized by the Congress. Experts in digital issues should be assigned to each major trade area such as agriculture or financial services.
• Pursue cross border data flow issues in the World Trade Organization’s Work Programme on Electronic Commerce

Establish Effective Global Rules on Privacy and Cybersecurity. The United States should use all tools at its disposal to persuade foreign governments that consumer privacy and cybersecurity rules must allow data-driven decision-making that uses the latest analytic tools of big data, machine learning and artificial intelligence. The Administration should continue to globally promote a risk-based approach to cybersecurity, and industry-led international standards. Government mandates and country-specific requirements should be rejected. SIIA recommends the following:

• Oppose the extraterritorial application of domestic privacy law. For example, the EU’s “right to be forgotten” should not be extended throughout the internet. Globalizing the right to be forgotten sets a dangerous precedent. More information can be found on this [blog](https://example.com).
• Use all appropriate venues to develop principles that will maximize the potential of data-driven innovation, especially in the G7 and G20 contexts. For instance, the Administration should ensure that economic benefits of Artificial Intelligence and data-driven innovation in general are realized, while at the same time ensuring that privacy and other concerns are appropriately addressed.
• The NIST Cybersecurity Framework should continue to serve as the model for how to achieve cybersecurity and the next Administration should intensify dialogues with other countries on the Framework with a view to encouraging adoption overseas.
• The Administration should push back strongly against foreign government cybersecurity requirements that are, in reality, covers for protectionism and/or ease of government access.
• The Administration should use the U.S.-Japan and U.S.-Korea dialogues to gain agreement on good cybersecurity practices that can serve as models regionally, and elevate the importance of stakeholder-driven cybersecurity practices at G7 and G20.
• Emphasize the constructive (if implemented) cybersecurity commitments made by China at the September 24-25, 2015 Obama-Xi [summit](https://example.com).
**Intellectual Property Protection to Foster Innovation and Entrepreneurship**

Strong and flexible intellectual property laws provide the incentives needed for innovation and entrepreneurship. SIIA shares the goal of building on past success, as it is clear that our intellectual property system is a model for the rest of the world, and it has long been the foundation of our national achievements in innovation.

Private sector innovation and investment have transformed federal seed money into new information and technology services benefitting the entire economy, and the IP ecosystem’s incentives have enabled industry to invest and bring these services to market. That ecosystem must be preserved to promote future growth.

**Reform the Patent System.** Patent reform is a critical U.S. economic priority. SIIA held events on the Capitol Hill with Congressional leaders to emphasize shared industry and public interest group support for reform legislation pending in the House and Senate. Although the patent system’s incentives are generally healthy, there are areas of significant litigation abuse—primarily through exploitation of procedural flaws and attempted enforcement of low-quality patents by non-practicing entities (colloquially known as patent trolls). These lawsuits are, in too many cases, a non-productive burden on industry, rather than a spur to genuine innovation. SIIA recommends the following steps to help the patent system maximize U.S. innovation:

- **Enact patent litigation reform legislation.** The technology sector has been the subject of frivolous suits brought by entities that never practice a patent, and exist only to sue others. These troll suits drain resources that should be invested in research and development. There is bipartisan support for legislation addressing venue abuse, sharpening pleading requirements, assessing attorneys’ fees in certain cases, and improving the transparency of the real parties in interest.

- **Provide strong Executive support of patent quality initiatives.** The Administration should continue to help PTO improve the quality of granted patents by setting a uniform definition of “patent quality,” formalizing incentives through which patent quality is effectively prioritized for patent examiners; and developing glossaries of common terms used in software and communications engineering.

**Modernize administration of the copyright system while maintaining incentives for creativity.** For over two centuries, copyright’s incentives have spurred the creation of a variety of creative works, from the maps, books, and charts of 1790 to the computer software and digital content of today. The Copyright Office and Congress are currently reviewing some aspects of our copyright system, such as embedded software, anti-circumvention, and the notice and takedown provisions of the Digital Millennium Copyright Act. As that review takes place, preserving the system’s powerful incentives for innovative expression must be an explicit priority. Copyright protection should not be conditioned on requirements that, for example, the creator accept overbroad open licensing schemes, or disclose trade secret material. The new Administration should ensure that federal agencies and departments do not undermine intellectual property protection for copyrighted works under federal grants or contracts through mandated open
licensing arrangements. The Constitution and the Copyright Act have struck the balance of rights and responsibilities that will encourage creative works while benefiting the public; burdening innovators with additional obligations would be both unfair and detrimental to the dissemination of important works. The Administration and Congress should work together to preserve the carefully crafted balances that exist in our copyright laws, which create the flexibility and strong protections necessary for innovation and creativity.

Unfortunately, the Copyright Office’s ability to respond to the growth in the availability and scope of copyrighted works has been hampered by an outdated regulatory system put in place in the 1800s. For the Copyright Office to perform its important role, it needs to be modernized. SIIA has written the leading white paper on the reasons for Copyright Office modernization and has testified several times before Congress on the issue.

- **The Copyright Office should have greater autonomy from the Library of Congress.** While the Library of Congress is doing its best to remedy previously identified problems, its mission is fundamentally different from that of the Copyright Office and, as a library, the Library of Congress is one of the stakeholders whose interests must be considered by the Copyright Office. In the short term, the Administration and Congress should support granting the Office the same autonomy that is afforded to the Congressional Research Service. In the long term, they should support the development of a fully-fledged independent legislative agency, run by a Presidential appointee.

- **The Copyright Office should have its own information technology system.** The Administration and Congress should support the Copyright Office’s immediate acquisition of its own information technology system, including cloud-based IT—one that is efficient, scalable, and adaptable to changing market conditions, as well as secure against foreign and domestic intrusion. Improving this technology will enable easier registration and deposit of works, recordation of assignments, identification of rights and permissions, and licensing of underlying content. It also may lead to new innovations that use well-organized and easily-accessible registration and recordation information to create new products and services.
Education Policies that Promote an Adaptable 21st Century Workforce

Education delivery has remained relatively unchanged for decades. Whole class lecture formats, worksheets, and textbooks still dominate classrooms despite the availability of digital content. Rapid advances in instructional technologies for teachers and students will drive dramatic breakthroughs in educational outcomes. Policymakers should adopt the following priorities to support innovation in education that will lead to improved student learning outcomes.

**Foster Data-Driven Education.** Data-driven innovation (DDI) has been a standard practice in other sectors for decades. But [data-driven education](#) has only recently become mainstream with the adoption of new school technologies and has already led to many critical discoveries in learning and educational policy that are improving pedagogy and student learning outcomes. SIIA recommends the following:

- Maintain Federal support for state longitudinal database systems and encourage standardization of data collection to improve data comparability across states.
- Promote professional development for teachers in using classroom and student data to tailor classroom and small group instruction as well as personalize individual student learning.
- [Support policies](#) that permit and encourage the educational use of innovative technologies in the classroom.
- Maintain a school’s current ability under the [Family Educational Rights and Privacy Act](#) (FERPA) to partner with school service technology and digital content providers for educational purposes.

**Encourage Student-Centric Higher Education Policies.** Higher education today has not kept pace with changes in student demographics, needs, or available technology. Federal policies have fostered an institution-centric system based on the credit hour and the assumption of a “traditional” student which has limited innovation in program design and delivery. The system must adapt to today’s students and the expectations for “on-demand” and affordable education. SIIA recommends the following:

- Support an [end to the over-reliance on the credit hour](#) or “seat time” for determining adequate progress or student commitment to their education in qualifying for federal financial aid.
- Support policies that will allow for innovation in program design and success measurements, such as competency-based education and accelerated learning programs.
- [Minimize burdens](#) on online learning programs that would create disincentives for institutions to innovate with distance learning.
- Support policies that allow partnerships between institutions and non-traditional content providers in order to grow availability of short-term educational and training programs to meet employment needs.
- Maintain the [expansion of Pell grant use](#) for the summer semester.

**Maintain a Competitive Marketplace for Quality Instructional Materials.** Content developers have been creating digital instructional materials for many years, but recent advances in technology have led to availability of more in-depth and interactive “native digital” content developed specifically for access through technology. More content is also being developed as openly licensed or open educational resources (OER), though the digital forms of OER tend to be less interactive – often simple PDFs of what would otherwise be available in print.
In this new market, policymakers should support policies that maintain a competitive marketplace of all material types, including commercial, open, physical, and digital, that will drive greater affordability without sacrificing quality elements, such as research-base, standards alignment, on-going educator support, accessibility, regular updates, and interoperability. It is critical that school districts, institutions, and educators maintain the academic freedom to identify, evaluate, pilot and adopt the materials best suited for their specific local programs, student body, and instructional style.

Prepare Today’s Students for the Global Economy. As technology has rapidly advanced over the last three decades, streamlining business processes and changing the dynamics of entire industries, the needs of employers have shifted from low-skill workers to those with higher, more specialized skills and industry-recognized credentials. Policy updates are needed to bring the US education and training pipeline in line with the demands of today’s employers in a global economy. SIIA recommends the following:

- Support a reauthorization of the Carl D. Perkins Career and Technical Education Act with a focus on programs of study, connections between secondary and postsecondary education, and industry-recognized credentials.
- Support the use of Pell grant funding and financial aid for short-term education programs leading to industry-recognized credentials in high-need industries.

Promote Innovation in the Classroom. With the 2015 passage of the Every Student Succeeds Act (ESSA), Congress found a balance between two important interests: protecting the integrity of public education through accountability, and maintaining schools’ ability to innovate in ways that improve pedagogy and student learning outcomes. The new flexibility awarded states and school districts will allow more innovation in the classroom. But more work in this area is still needed. SIIA recommends the following:

- Promote the use of data as a “spotlight” to inform instruction, personalize learning, and to highlight inequality.
- Maintain support for, and provide guidance on, the use of computer adaptive assessments, as allowed under ESSA, to help educators tailor instructional interventions based on student needs.
- Promote and support funding to assist state participation in the Innovative Assessment Pilot Program to help schools develop alternative assessment tools.
- Support full funding for the ESSA Title IV(a) Student Success and Academic Enrichment grant program which will provide critical professional development for teachers in the effective use of technology in the classroom.
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