

# R2 Technology Policy Report

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# Agenda

- Relevant bills discussed, introduced or reintroduced in Congress
- Music Modernization Act
- 301 Investigation
- Cybersecurity
- AI
- NIST priorities
- Data privacy
- Sprint – T-Mobile merger
- IEEE-USA Congressional Visit Days (CVD) and Key Policy Asks

# U.S. Patent Act § 101 Proposed Reform

*Sens. Tillis (R-NC), Coons (D-DE); Reps. Collins (R-GA), Johnson (D-GA), Stivers (R-OH)*

- Patentable Subject Matter (Section § 101 of the Patent Act) reform has been proposed by Senate Judiciary Subcommittee on Intellectual Property and House Judiciary;
- “Framework” on Section 101 reform released:
  - Keep existing statutory categories of process, machine, manufacture, or composition of matter, or any useful improvement thereof.
  - Eliminate, within the eligibility requirement, that any invention or discovery be both “new and useful.” Instead, simply require that the invention meet existing statutory utility requirements.
  - Define, in a closed list, exclusive categories of statutory subject matter which alone should not be eligible for patent protection. The sole list of exclusions might include the following categories.

# U.S. Patent Act § 101 (cont.)

*Sens. Tillis (R-NC), Coons (D-DE); Reps. Collins (R-GA), Johnson (D-GA), Stivers (R-OH)*

- “Framework” on Section 101 reform released (cont.):
  - Create a “practical application” test to ensure that the statutorily ineligible subject matter is construed narrowly.
  - Ensure that simply reciting generic technical language or generic functional language does not salvage an otherwise ineligible claim.
  - Statutorily abrogate judicially created exceptions to patent eligible subject matter in favor of exclusive statutory categories of ineligible subject matter.
  - Make clear that eligibility is determined by considering each and every element of the claim as a whole and without regard to considerations properly addressed by 102, 103 and 112.

# STRONGER Patents Act

*Sen. Coons (D-DE)*

- “Support Technology and Research for Our Nation's Growth and Economic Resilience Patents Act of 2017” or the “STRONGER Patents Act of 2017”;
- Proposal would:
  - Require the PTAB to use the same standards as district court
  - Restrict the ability of challengers to file and maintain IPR proceedings at the PTAB
  - Re-establish presumption of injunctive relief upon a finding of infringement
  - Reverse several Supreme Court precedents
  - Empower the FTC against misleading and deceptive practices of patent infringement demand letters
- Introduced in Senate, companion bill introduced in the House, sponsored by Reps. Stivers (R-OH) and Foster (D-IL);
- <https://www.congress.gov/bill/115th-congress/senate-bill/1390>.

# TROL Act

*Rep. Burgess (R-TX)*

- “Targeting Rogue and Opaque Letters Act of 2015” or the “TROL Act of 2015” reintroduced in House;
- The TROL Act makes it an unfair or deceptive act or practice for a person to knowingly send misleading demand letters asserting patent infringement;
- Bill would allow the FTC to impose civil penalties on patent trolls that sends such misleading demand letters;
- Most (all?) of the provisions of the TROL Act are included in the broader STRONGER Patents Act;
- <https://www.congress.gov/bill/114th-congress/house-bill/2045/text>.

# Startup Act

*Sens. Moran (R-KS), Warner (D-VA), Blunt (R-MO) and Klobuchar (D-MN)*

- The act would among other things create “entrepreneur” and “STEM” categories of visas for “highly-educated individuals”;
- For example, the bill would adjust the status of no more than 50,000 aliens with masters and doctorate degrees in a STEM field to “conditionally admitted for permanent residence”;
- Allow them to remain in the country for up to a year after the expiration of a student visa or indefinitely if they remained in a STEM field;
- <https://www.congress.gov/bill/115th-congress/senate-bill/1877>.

# Music Modernization Act

- Signed into law in October 2018 after passed both House and Senate unanimously;
- The act (H.R. 1551, the “Orrin G. Hatch-Bob Goodlatte Music Modernization Act”) updates copyright law in digital streaming era;
- Key updates:
  - The creation of an organization — led by songwriters and publishers —to ensure copyright owners are paid when songs are streamed on streaming platforms;
  - Artists receive royalties on songs recorded before 1972;
  - Creating a uniform payment process for music producers to receive royalties.
- <https://www.congress.gov/bill/115th-congress/house-bill/1551>.



# 301 Investigation

- “Under Section 301 of the Trade Act of 1974, USTR initiated an investigation to determine whether China’s acts, policies, and practices related to technology transfer, intellectual property, and innovation are unreasonable or discriminatory, and burden or restrict U.S. commerce.”
- “USTR held a public hearing on October 10, 2017, consulted with private sector advisory committees, held two rounds of public comment periods, and received approximately 70 written submissions [...]”
- “USTR [...] determined that numerous acts, policies, and practices of the government of China related to technology transfer, intellectual property, and innovation are unreasonable or discriminatory, and burden or restrict U.S. commerce.”
- Source: <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2018/june/section-301-investigation-fact-sheet>.

# Cybersecurity

- National Cyber Strategy (Sept. 2018):  
<https://www.whitehouse.gov/wp-content/uploads/2018/09/National-Cyber-Strategy.pdf>;
- NIST Cybersecurity Framework:  
<https://www.nist.gov/cyberframework>:
  - “Celebrated” its 5<sup>th</sup> year anniversary;
  - Framework consists of standards, guidelines, and best practices to manage cybersecurity-related risk.
- Remarks on cybersecurity and privacy by NIST Director, Dr. Copan:  
<https://www.nist.gov/speech-testimony/nists-collaborative-approach-cybersecurity-and-cultivating-trust>:
  - Multiple IoT projects being carried out at the [National Cybersecurity Center of Excellence](#), NCCoE.
- Ongoing national and international debate on mobile infrastructure equipment and 5G deployment.

# Executive Order on [...] AI

Coordinated Federal Government strategy, the American AI Initiative, guided by five principles:

- “The U.S. must drive technological breakthroughs in AI across the Federal Government, industry, and academia.”
- “The U.S. must drive development of appropriate technical standards [...] in order to enable the creation of new AI-related industries and the adoption of AI [...].”
- “The U.S. must train current and future generations of American workers with the skills to develop and apply AI technologies [...].”
- “The U.S. must foster public trust and confidence in AI technologies [...].”
- “The U.S. must promote an international environment that supports American AI research and innovation and opens markets for American AI industries, while protecting our technological advantage in AI and protecting our critical AI technologies from acquisition by strategic competitors and adversarial nations.”
- <https://www.whitehouse.gov/presidential-actions/executive-order-maintaining-american-leadership-artificial-intelligence/>.

# NIST Priorities

- Top technology priorities:
  - 5G and beyond;
  - AI and Machine Learning;
  - Implementations of IoT (horizontal enabling technologies).
- Standards have never had a higher visibility within the USG:
  - However, many Government officials with specific expertise in standards have left or retired, there is a need to educate officials about standards.
- China's participation and leadership in standards development:
  - Part of China's long-term strategic planning;
  - What can the U.S. do to remain competitive and maintain leadership?
- Federal agencies as stakeholders for standards use and development:
  - Not only NIST, DoT (autonomous vehicles and 5G), DoE (AI and smart grid);
- Under internal discussion: tax credit for R&D expanded to cover standards development?

# General Data Protection Regulation (GDPR)

- Codifies and unifies data privacy laws across all European Union member countries;
- Penalties for non-compliance with the provisions of the GDPR regarding collecting and using personal data are potentially devastating:
  - Fines up to 4% of annual global turnover or 20 Million Euros, whichever is greater
- Applicable to any business collecting personal data from a citizen of the EU;
- Personal data is defined as any information related to a natural person that can be used to directly or indirectly identify that person;
- <https://eugdpr.org/>.

# California Consumer Privacy Act

- Provides consumers with more control over their personal information;
- Applies to for-profit entities that both collect and process the Personal Information of California residents:
  - Physical presence in California is not a requirement, making sales in the state would be sufficient
- Business must meet at least one of the following:
  - Generate annual gross revenue in excess of \$25 million;
  - Receive or share personal information of more than 50,000 California residents annually; or
  - Derive at least 50 percent of its annual revenue by selling the personal information of California residents.
- Businesses that fail to comply are subject to civil penalties of up to \$2,500 per violation and \$7,500 per intentional violation.

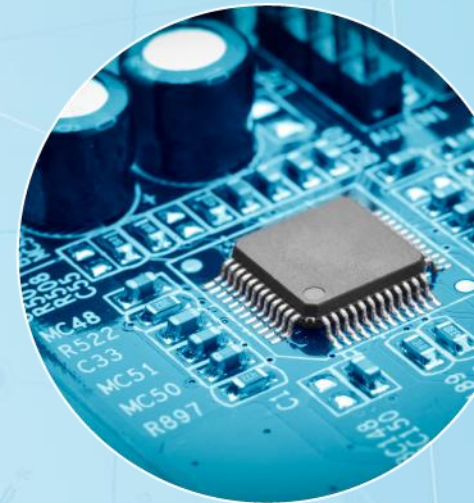
# Data Privacy

- Facebook Expects to Be Fined Up to \$5 Billion by F.T.C. Over Privacy Issues:
  - The penalty would be a record by the agency against a technology company;
  - The F.T.C. opened a new investigation last year over data being harvested without users' consent by Cambridge Analytica;
  - Facebook also suffered a data breach that exposed the personal information of nearly 50 million users;
  - <https://www.theonion.com/facebook-users-morbidly-curious-what-site-going-to-do-w-1834338598>.
- Department of Homeland Security use of facial recognition in top US airports
  - How much data the government should be allowed to collect and in what ways it might be used?
  - No federal regulation with respect to the use of biometric data.

# Sprint – T-Mobile Merger

- Merger announced via Twitter by John Legere on Apr. 29, 2018;
- \$26.5 billion deal, \$59 billion with debt;
- Combined company would have more than 126 million customers, bringing it closer to rivals AT&T (141 million subscribers) and Verizon (150 million);
- The merger could also mean an improvement in overall 5G wireless technology;
- The Wall Street Journal reported on April 16 that the deal was meeting resistance with antitrust officials at the Justice Department.





# IEEE-USA CVD and Key Policy Asks

# President Trump's Budget

Science & Tech Agencies in the Trump Administration's Budgets

Proposed year-over-year changes, nominal dollars

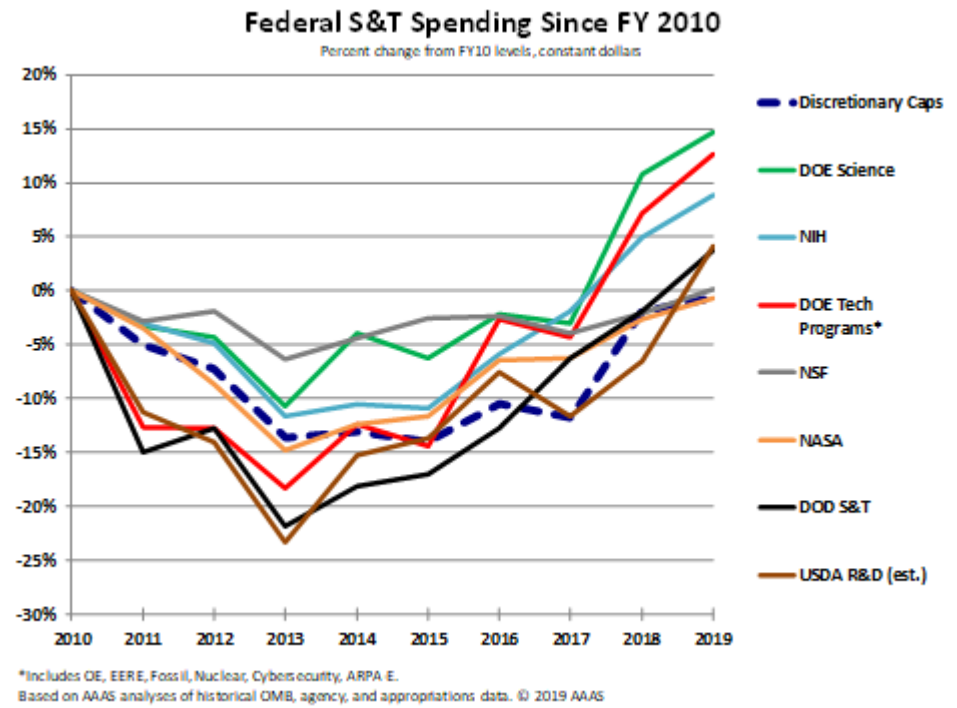


\*Includes renewables, efficiency, nuclear, fossil, grid research, cybersecurity, ARPA-E. | AAAS



# Actual Federal S&T Spending

- Despite proposed cuts, Federal spending in science and technology has actually increased steadily from 2013;
- Most Federal Agencies' budgets have done well over the past few years, after facing cuts earlier in the decade.



# IEEE USA Policy Asks - CVD

## R&D:

- DOD
- DOE Office of Science
- NASA
- NSF
- NIST

## Immigration:

- Green Cards
- Not Guest workers

## Digital Privacy:

- Transparency
- Individual control
- Security

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# R&D Key Messages

- Please Maintain federal support for R&D: **4% plus inflation**
- Crucial investments in America's future
- Key to maintaining our international competitiveness
- Not very much money

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# Immigration

- **Green cards, not guest workers**
- Shift focus of US policy from temporary visas to citizenship
- Reform the H-1B!
- Country-cap bill
  - Our members are split. Some will be helped, others hurt
  - Adding more skilled green cards will turn a wash into a winner

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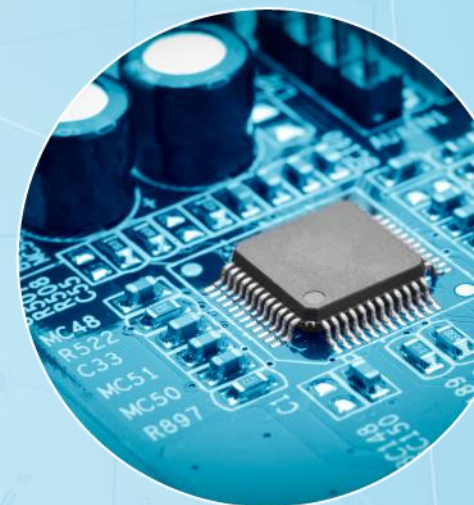


# Digital Privacy

- Internet Bill of Rights
  - Does not exist yet, but being drafted by Rep. Ro Khanna (D-CA)
- The issue is, what rights do people have on-line and to their digital information?
- Our position:
  - Digital data collection efforts must be transparent
  - People have a right to control the collection and use of their data - and have bad data corrected
  - Companies must secure any data they collect, and be liable if they don't

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# Background Slides