



Testimony of Robert N. Schmidt  
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Before the  
Senate Small Business and Entrepreneurship Committee  
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Senator Vitter, Senator Cardin, Committee Members, I am grateful for the privilege of testifying today on a very important matter for technology startups and small business. I am here today as the Co-Chair of the [Small Business Technology Council](#)<sup>1</sup> (SBTC), the high tech arm of the National Small Business Association (NSBA), which is the nation's longest running small-business advocacy organization.<sup>2</sup> Although NSBA has expressed its concerns elsewhere on behalf of a broader constituency,<sup>3</sup> today I speak on behalf of the 5,000 firms who participate in the [Small Business Innovation Research](#)<sup>4</sup> (SBIR) and [Small Business Technology Transfer](#)<sup>5</sup> (STTR) programs. I do so to raise our concerns regarding the detrimental effects that "Patent Reform" bills such as H.R. 9, the so-called "Innovation Act," will have on small inventing companies. We would like to add small business to the list of universities, venture capitalists, technology startups, small inventor entrepreneurs, former patent commissioners, conservatives, liberals, and Patent Court judges that oppose such legislation as currently written. Crafting a narrow and targeted alternative to this harmful legislation is important to small business and inventors, as patents are critical to all innovative firms, especially SBIR firms.

Small Businesses employ 37% of scientists and engineers.<sup>6</sup> SBIR firms have received about 121,000 patents,<sup>7</sup> and small businesses create **16.5 times** more patents per employee than large firms.<sup>8</sup> And SBIR firms employ 7.28% of all of America's STEM workers.<sup>9</sup> While ostensibly aimed at curbing a small number and anecdotal instances of abusive patent litigation, the overbroad and sweeping proposed legislation in H.R. 9 will have the effect of suppressing patent rights of *all* patentees, and in particular, will hurt the small high-tech, job-creating SBIR businesses, and thus the economy.<sup>10</sup> Simply stated, patents are far more important to small businesses' survival than to large businesses. And licensed patents are the only way universities can commercialize their research.

SBIR firms receive a quarter of America's R&D 100 awards (the world's most valuable patents) and create 58% more patents than all universities combined.<sup>11</sup> SBIR firms employ scientists that have received 11 Nobel prizes, receive one in every seven VC dollars, and were involved in 1,866 Mergers and Acquisition deals.<sup>12</sup> The Fortune 500 firms' share in generating key innovations has dropped from over 40% in the 1970s and early 1980s to just 6%. Large firms can and do survive without strong patent rights. Small businesses cannot. Weakening patent rights will threaten the very interests of universities and small businesses that Congress sought to protect in appropriating R&D funds, thereby undermining the taxpayers' important investment in research commercialization and domestic job creation. **Without strong patents, foreign interests will usurp American R&D and commercialize our efforts overseas.**

The Senate is *now* presented with the choice between two bills, the House's H.R. 9, the counterfactually-named "[Innovation Act](#)",<sup>13</sup> or S.632, the appropriately-termed [STRONG Patents Act of 2015](#).<sup>14</sup> H.R. 9, which I believe should be more aptly named "The Ending the American Dream Act," clouds title to patents<sup>15</sup>, weakens the patent holder's ability to economically enforce their patent,<sup>16, 17</sup> and undermines fund-raising and licensing activities.<sup>18</sup> In contrast, the STRONG Patents Act secures the user fees from diversion away from the Patent Office, ensuring that resources are commensurate with examination workload, and protects patent holders from large patent "Ogres" who would otherwise infringe their valid patents with impunity. Let me repeat, H.R. 9, eliminate trolls, but it will engender the large monopolistic and market dominant firms, encouraging more Patent Ogre activity.

But before we get into the details, we must first understand the importance of the decision before you – weakening or strengthening patent rights. The Federal Reserve found that patents are the number one indicator of regional wealth,<sup>19</sup> more important than education or infrastructure. Being a high patenting community means the difference of [\\$8,600 in household income](#).<sup>20</sup>

In 2012, Intellectual Property (IP) was responsible for sustaining more than [55.7 million jobs](#) in the U.S.<sup>21</sup> Intangible assets including corporate IP and brand recognition account for [84 percent of the value of U.S. public companies](#).<sup>22</sup> Innovative methods of patent licensing can add up to [\\$200 billion in new annual growth](#) to the U.S. economy. IP-based business activities constitute approximately [55 percent of U.S. GDP](#),<sup>23</sup> and in 2011, IP-based assets were valued at about \$9 trillion.<sup>24</sup> These baselines should give us all pause, as they provide the missing context for the (inflated but relatively miniscule) alleged \$29 billion per year costs of "troll" litigation that we keep hearing from proponents of H.R. 9. Thus, hasty decisions changing the patent laws would result in several orders of magnitude more risk, which can result in downturn shocks to our economy that are several times that caused by the housing crisis of 2008.

This debate on several aspects of patent legislation is primarily between the large market dominant IT firms and small players such as those that participate in the SBIR program. However, when it comes to patent legislation, it is far more important that Congress pay attention to the plight of small businesses who create 64% of all new private sector jobs.<sup>25</sup> The major IT firms supporting the Innovation Act: Google, Cisco Systems, and Microsoft combined have about 125,000 US employees.<sup>26</sup> SBIR companies employ over 500,000 STEM employees.<sup>27</sup>

### **The America Invents Act of 2011.**

The America Invents Act<sup>28</sup> (AIA) was in part "sold" on stopping rampant litigation by so-called "Patent Trolls", and in part on harmonizing our patent system with that of the rest of the world (The AIA made our economy more like France). Instead, the AIA only caused much higher rate of litigation, surging to unprecedented levels.<sup>29</sup> Immediately after the AIA was passed, its proponents changed their tune and insisted that the new "Innovation Act" is needed to stop the "Trolls". However, as we have seen, neither the AIA nor the Innovation Act will solve the Troll problem. What already has largely quashed any Troll problem that might have ever existed are recent Supreme Court decisions in *Octane Fitness v. Icon*<sup>30</sup> and *Highmark v. Allcare*,<sup>31</sup> which have the effect of reducing patent litigation. They relaxed the standards for awarding attorney fees and costs to the prevailing party.

The AIA made it harder to get a patent and harder to sustain it in post grant challenges in the Patent Office and in court. Substantially limiting the one-year grace period, made many inventors lose their patent rights due to prior disclosures and public use or sale. It also made it much more difficult to obtain funding as VCs generally won't sign non-disclosures. Inter Partes and Post Grant Reviews also added another nine months after patent issue to clear the title from potential infringers attacking the patentee's claims. As "time is money," this can be critically debilitating for new startups.

The AIA and recent court decisions are already causing a devaluation of American wealth. *“Publicly held corporations will have to report any material devaluation to shareholders and the Securities and Exchange Commission (SEC), resulting in a devastating impact on patent centric companies. Hardest hit will be the high tech and biotech firms, which contribute significantly to U.S. economic growth, particularly through job creation and whose innovations are primarily responsible for the United States’ edge over global competitors.”*<sup>32,33</sup> Other writings are also calling for a Mark to Market approach to devalue companies due to the declining value of patents in the US.<sup>34</sup>

### The “Innovation Act” of 2015, HR 9.

The recent “Patent Reform” bills, such as H.R. 3309 and H.R. 9, its identical follow-up in this Congress, have an insidious effect on small businesses. This proposed legislation will deprive small inventors of opportunities to get the best inventions to market because it will deter investors from making what would constitute much riskier investments. By imposing: Fee Shifting Joinder, Loser Pays, Pay to Play, Covered Business Methods (CBM), Elimination of Post Grant Review Estoppel, Disclosure of All Plaintiff Interested Parties, Enhanced Pleadings and Limiting Discovery, and Customer Stay provisions that are so onerous, only large corporations will be able to commercialize inventions. **The provisions will make small inventing companies “Toxic Assets” to investors.** H.R. 9’s provisions micromanage procedures and adjudication in patent cases. It takes much discretion away from the judiciary in case-management based on their expertise and judgment for the particular case at hand. Only a few of the concerns will be discussed here for brevity. For example some manifestly one-sided provisions are:

- Section 3(a) is unduly burdensome and raises pleading standards only on patent owners, requiring detailed particularities in alleging infringement, but has no similar requirements that defendants making counterclaims or filing declaratory actions show with particularity why they do not infringe or why the patent is invalid.
- Section 3(b)(1) effectively requires the loser of a patent suit to pay the prevailing party legal fees and costs. This is the most onerous provision of the bill for small business litigants as this significantly raises the risk, where the small company owner risks losing everything. It will have severe chilling effects on small entities’ ability to access the courts to seek redress.
- Section 3(d) provides that if the losing party is unable to pay, the court may make recoverable such awards against a joined “Interested Party” (investor or licensee of patentee) but no such joinder of an “Interested Party” in a non-prevailing insolvent alleged infringer is provided in the section. This provision removes corporate protections for tangential players and imposes mandatory disclosures on licensees, or investors, revealing strategic information to their rivals. This will discourage investment in patenting companies and perversely increase incentives to invest in infringers.
- Section, 9(a) undoes the hard-fought balance in the AIA by removing the “reasonably could have raised” estoppel that now prevents alleged infringers from having multiple “bites at the apple” and prolonging court proceedings, increasing cost to the patent holder, and making it more difficult for small patent holders to raise money.

The details of these and many more legislative “potholes” were previously described in my five part series in IP WatchDog. (See References<sup>35,36,37,38,39</sup>) SBTC and the NSBA have also made our strong opposition to the Innovation Act known to Congress and the Administration.<sup>40,41,42,43,44</sup> Many concerns similar to ours have also been expressed to the Senate Small Business and Entrepreneurship Committee by the SBA Office of Advocacy.<sup>45</sup>

One of the more disturbing “sales techniques” for H.R. 9 is the use of highly disputed ‘facts’ and flawed studies cited by proponents regarding the \$29 billion direct costs,<sup>46,47</sup> and the \$80 billion per year social cost.<sup>48</sup> These and other flawed “scholarship” have been debunked by 40 economists and law professors,

and their letter<sup>49</sup> expresses serious concern that Congress will restructure the U.S. patent system based on flawed, unreliable, and unrepresentative studies of patent litigation, and it urges Congress to proceed with caution to ensure balanced, targeted, legislation.

An even more disturbing element of H.R. 9 is what is not in the bill. It does not correct the \$1.7 Billion dollar “invention tax” which has been levied on inventors by diverting patent office fees to the general government fund. Ending fee diversion and using fees for sufficient examination is critical to improving the patent system.

In a speech David Kappos made on March 13, 2015,<sup>50</sup> the former director of the United States Patent and Trademark Office (USPTO) made a number of statements, which are summarized in the footnotes. The most salient points are:

- Some reasonable level of disputes is inherent in an IP system whose success depends on flexibility, and patent litigation is no worse than in the past.
- The patent system has long time constants. The impact of present changes will only be realized many years down the line, and we have not yet felt all the effects of the AIA. Proposed changes are like addressing a hangnail with an amputation.
- Competitors are laughing at the prospect of the US significantly weakening its patent system and giving a leg up to our competitors.
- The data shows an irrefutable decline in patent litigation, not an increase. The number of litigants in new district court patent cases declined over 23% from 2013 to 2014, down to 16,089—the lowest level since 2009.
- All this data taken together screams that the AIA is working, and that “**whatever further tinkering is needed, it should take a light touch.**” [Emphasis mine.]
- The denial rate in 2015 to date for attorney fees is only 48%. [Thus, we can see that in more than half the cases this year, attorney fees are already being awarded when requested. It is hard to understand why additional legislative action is required here. There is also difficulty in identifying a “prevailing party” in the common situation where a litigant prevails on some issues but not others, and how does one legislate a “reasonable fee.”
- Problems with customer stays include: (1) customizable technologies where the retailer can modify the product, and (2) data shows that courts are readily using the customer stay authority. The facts demonstrate no necessity for congressional action in this area.

Monopolists and other large dominant firms<sup>51,52,53</sup> know that either only other large firms or patents are the only market forces that can break their control of the market. These Monopolists and large dominant firms want to preserve their dominance in the field by using their vast influence and wealth to change laws in their favor, maintaining their market power.

H.R. 9 and past similar bills have also been opposed by the former head of the USPTO, David Kappos,<sup>54, 55, 56, 57, 58, 59, 60</sup> the former Chief Judge of the Federal Circuit, Paul Michel,<sup>61, 62, 63, 64, 65</sup> universities,<sup>66, 67, 68, 69, 70, 71, 72, 73</sup> Venture Capitalists,<sup>74, 75, 76, 77, 78, 79</sup> entrepreneurs,<sup>80, 81, 82, 83, 84</sup> and conservatives.<sup>85,86,87,88,89,90,91,92,93,94,95</sup>

H.R. 9 and previous related Senate legislation do nothing to solve the Troll issue, but do make sure that small inventors can never afford to enforce their patents. They attempt to overturn 220 years of American growth by fundamentally changing the economy, from one that thrives on technical innovation to one that makes market dominance the primary criteria for continued success. HR 9 will substantially cut the potential value and job-creating incentives of new innovations. This will discourage innovation, slow the economy, and put American businesses at a disadvantage against foreign competition.

As an example of why the “Patent Reform” does not solve the Troll issue, Virginia Gavin, owner of Appligent Inc., and a member of the NSBA, having received two demand letters and paid twice, was extremely anti-troll. Once she understood each and every provision of HR 3309, she stated, **“There is NOTHING in this bill that will help me and several items that will harm my business.”** Thus, NSBA opposed HR 9.<sup>[See footnote 3]</sup> Others will come to the same conclusion once they have studied the details H.R. 9.

H.R. 9 will also severely impact licensing in America. Licensees may become responsible for the court costs of the patent litigation winner should their licensor lose. More importantly, the licensee’s business plans may be disclosed months or years prior to their anticipated market announcement as the courts reveal the existence of the license, and thus the licensee’s planned technology path to the competition, foreign and domestic. Weakening patents and the resulting decline in licensing will also directly hurt universities.

### **The STRONG Patents Act of 2015.**

Small business inventors do support legislation proposed in the STRONG Patent Act of 2015, proposed by Senator Coons, <http://www.coons.senate.gov/patents>. This legislation will protect companies from trolls but will not hurt small inventors.<sup>96</sup> It subsumes the prior TROL Act,<sup>97</sup> which was supported by the SBTC.<sup>98</sup>

SBTC supports the STRONG Act even as currently written because it does no harm to small inventors or the American economy, and because it has many attractive amendments such as making Inter Partes and Post Grant Reviews fairer for the patent holder. That said, the STRONG Act can be improved by:

- Incorporating clarifying language into 35 USC 102 that would provide clear and reliable provisions to restore the one-year grace period. This will ensure that public use and on sale activities less than one year prior to filing an application do not constitute a bar to obtaining a patent.
- Legislating a clear rule of law for patentable subject matter, thereby removing the immense judge-made ambiguity and uncertainty regarding eligible and ineligible subject matter.
- Providing greater elasticity for punitive behavior for small inventors and startup companies when they have acted in good faith and they make honest mistakes when attempting to enforce their patents, as even the Supreme Court has trouble telling us inventors the metes and bounds of terms like “abstract”, and patent claims require parties to define the metes and bounds of every single word in a claim.
- Extending the protections ensuring expedited procedures accorded in Section 111(c)(2) of the STRONG Act to small business concerns in order to also provide such expedited procedures for small business concerns that assert patents.

I thank you for allowing me to testify, and I would be happy to answer any questions you might have now, or later in writing for the record, at [rschmidt@CleveMed.com](mailto:rschmidt@CleveMed.com) or by phone at 216-374-7237.

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## References:

<sup>1</sup> [www.sbtc.org](http://www.sbtc.org)

<sup>2</sup> [www.nsba.biz](http://www.nsba.biz)

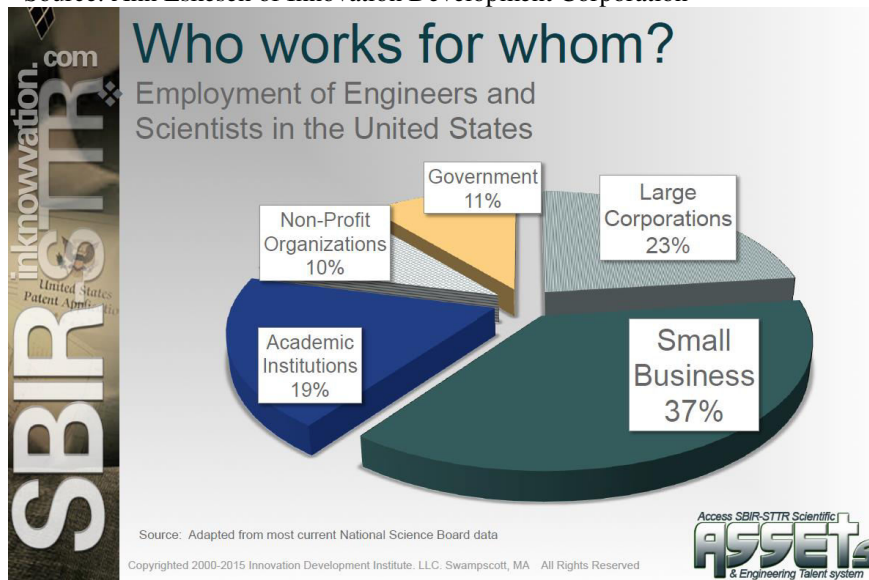
<sup>3</sup> [www.nsba.biz/?p=9389](http://www.nsba.biz/?p=9389), “NSBA has previously urged lawmakers to oppose this bill [H.R. 3309, identical to HR 9] due to the rushed process in bringing the bill to the floor, the lack of small-business input throughout the process and the inclusion of several provisions that create an undue or unfair burden on small, innovative firms, including, but not limited to: fee-shifting, pay-to-play, and covered business methods, which would disproportionately affect small-business inventors and make the cost of defending patents too burdensome to litigate”; [www.nsba.biz/wp-content/uploads/2013/10/Patent-Coalition-Letter.pdf](http://www.nsba.biz/wp-content/uploads/2013/10/Patent-Coalition-Letter.pdf); [www.nsba.biz/wp-content/uploads/2013/12/NSBA-Letter-in-Opposition-to-the-Innovation-Act-HR-3309.pdf](http://www.nsba.biz/wp-content/uploads/2013/12/NSBA-Letter-in-Opposition-to-the-Innovation-Act-HR-3309.pdf);

[www.nsba.biz/?p=7273](http://www.nsba.biz/?p=7273).

<sup>4</sup> <https://www.sba.gov/offices/headquarters/oca/resources/6827>

<sup>5</sup> <https://www.sba.gov/offices/headquarters/oca/resources/6828>

<sup>6</sup> Source: Ann Eskesen of Innovation Development Corporation



<sup>7</sup> [www.Inknowvation.com](http://www.Inknowvation.com)

<sup>8</sup> <https://www.sba.gov/sites/default/files/sbfaq.pdf>

<sup>9</sup> Source: Ann Eskesen of Innovation Development Corporation



Analysis of extent to which SBIR-STTR Awardees by State and overall are a factor in US STEM employment

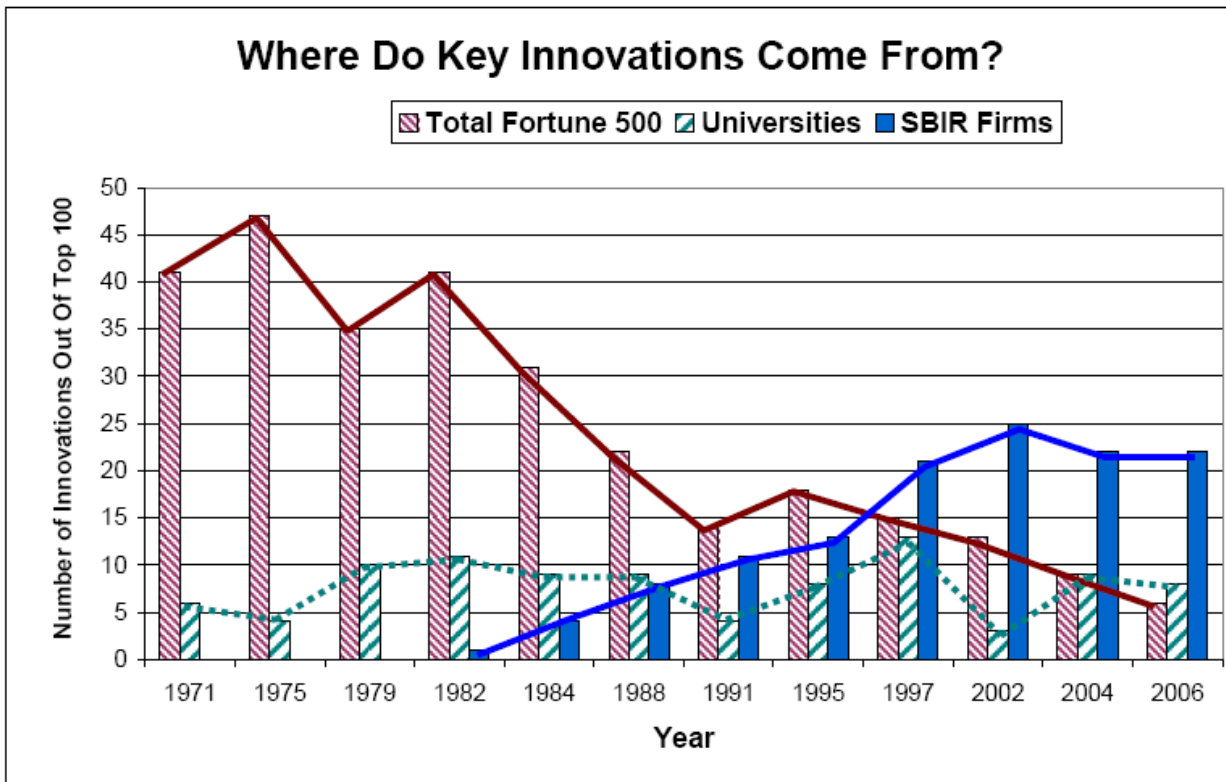
State	Number of SBIR-STTR Awardees	Calculated SBIR-STTR employment	STEM Jobs (2011 data)	% STEM employment being SBIR connected	STEM jobs as percentage of total employment	Percentage of all US STEM jobs
		Notes 1	Notes 2		Notes 3	
AK	28	488	19,902	2.45%	8.01%	0.29%
AL	281	11,592	79,700	14.54%	5.43%	1.16%
AR	71	388	40,087	0.97%	4.24%	0.58%
AZ	378	6,990	123,994	5.64%	6.06%	1.81%
CA	4,514	110,067	895,461	12.29%	7.06%	13.06%
CO	742	12,200	167,347	7.29%	8.85%	2.44%
CT	334	7,612	88,996	8.55%	6.39%	1.30%
DC	88	1,156	72,143	1.60%	15.26%	1.05%
DE	63	1,601	24,847	6.44%	7.20%	0.36%
FL	707	13,637	294,372	4.63%	4.66%	4.29%
GA	347	5,164	171,747	3.01%	5.38%	2.51%
HI	95	1,316	22,186	5.93%	4.59%	0.32%
IA	122	2,069	57,066	3.63%	4.60%	0.83%
ID	86	1,628	34,725	4.69%	6.89%	0.51%
IL	563	7,279	260,730	2.79%	5.38%	3.80%
IN	246	3,941	106,432	3.70%	4.40%	1.55%
KS	93	979	64,069	1.53%	5.95%	0.93%
KY	130	1,306	60,908	2.14%	4.18%	0.89%
LA	84	1,531	59,848	2.56%	3.89%	0.87%
MA	1,797	53,214	249,900	21.29%	8.84%	3.65%
MD	1,061	22,529	202,100	11.15%	9.98%	2.95%
ME	105	1,671	22,397	7.46%	4.60%	0.33%
MI	567	10,291	231,148	4.45%	6.85%	3.37%
MN	308	8,056	157,681	5.11%	6.93%	2.30%
MO	206	3,941	118,544	3.32%	5.42%	1.73%
MS	58	705	31,658	2.23%	3.74%	0.46%
MT	102	1,125	19,447	5.78%	5.59%	0.28%
NC	515	7,859	184,958	4.25%	5.73%	2.70%
ND	36	1,160	12,893	9.00%	3.74%	0.19%
NE	58	1,115	38,768	2.88%	5.08%	0.57%
NH	169	4,578	35,069	13.05%	3.55%	0.51%
NJ	674	16,762	225,629	7.43%	42.79%	3.29%
NM	312	6,075	45,908	13.23%	1.44%	0.67%
NV	85	1,399	32,548	4.30%	5.40%	0.47%

NY	1,090	20,848	392,267	5.31%	5.46%	5.72%
OH	740	14,332	242,913	5.90%	5.60%	3.54%
OK	108	2,275	57,176	3.98%	4.68%	0.83%
OR	302	6,486	87,500	7.41%	6.38%	1.28%
PA	948	22,723	273,038	8.32%	5.59%	3.98%
RI	97	3,402	20,750	16.40%	5.29%	0.30%
SC	113	1,449	73,464	1.97%	4.97%	1.07%
SD	49	456	13,825	3.30%	4.20%	0.20%
TN	229	4,726	84,300	5.61%	3.76%	1.23%
TX	954	21,282	579,264	3.67%	6.46%	8.45%
UT	301	6,757	66,055	10.23%	6.56%	0.96%
VA	1,064	38,928	302,219	12.88%	10.32%	4.41%
VT	69	1,319	15,991	8.25%	6.47%	0.23%
WA	615	13,336	238,417	5.59%	10.02%	3.48%
WI	311	8,043	120,704	6.66%	5.21%	1.76%
WV	44	696	23,021	3.02%	4.06%	0.34%
WY	49	622	11,620	5.35%	5.48%	0.17%
<b>Totals</b>	<b>22,108</b>	<b>499,104</b>	<b>6,855,732</b>	<b>7.28%</b>	<b>6.20%</b>	<b>100%</b>

Notes:  
 Tracking by Innovation Development Institute of employment in SBIR-STTR involved firms is by 12 ranges: small for lower ranges (1-4; 5-9 etc) to large for limited number of larger firms (250-499). Firms having exceeded SBIR Size Note 1 standards (500 employees) are designated 500+ (not small). Except for those Awardees only recently SBIR-STTR graduated and then only for those employment numbers at time of last award, latter not factored into estimated employment numbers used in this analysis.  
 Note 2 Source data: EMSI | Economic Modeling Specialists International.

<sup>10</sup> Patents are critical to the success of SBIR Program participants. The Innovation Act makes patents harder to get and to keep, which will likely retard some companies from commercializing, thus causing them to be removed from the program. This is another way the Innovation Act will decrease company success and employment in the US.

<sup>11</sup> [http://www.itif.org/files/Where\\_do\\_innovations\\_come\\_from.pdf](http://www.itif.org/files/Where_do_innovations_come_from.pdf)



SBIR firms receive about three to four times as many R&D 100 awards as Fortune 500 Companies, on a tiny fraction of the budget.

<sup>12</sup> [www.inknowvation.com](http://www.inknowvation.com)

<sup>13</sup> <https://www.congress.gov/114/bills/hr9/BILLS-114hr9ih.pdf>

<sup>14</sup> <http://patentlyo.com/media/2015/03/STRONG-Patents-Act-of-2015.pdf>

<sup>15</sup> For example, See HR 9 section, 9(a) striking “or reasonably could have raised,” allowing infringers to have multiple bites at the apple, prolonging Post Grant Review proceedings, increasing cost to the patent holder, and making it more difficult for small patent holders to raise money.

<sup>16</sup> For example, See HR 9 section 3(a), which makes it much harder for patent holders to plead before they do discovery, and they can’t do discovery until after they plead.

<sup>17</sup> For example, See HR 9 section 3(b)(1), which requires the loser of a patent suit pay the prevailing parties legal fees. This is the most onerous provision of the bill for small patent holders who try to enforce their patent. Large firms typically spend several times as much on defense attorneys as plaintiffs spend on their legal costs. This significantly raises the risk, where the small company owner risks losing not only their company, but their house, and then their spouse and children.

<sup>18</sup> For example, See HR 9, where funders and licensees can be joined and become personally responsible for all legal cost of the prevailing parties should they lose. It also discloses licensees, publishing to their competitors their technology roadmap in the fact that they had licensed a technology, presumably for a commercial purpose.

<sup>19</sup> See Federal Reserve Bank of Cleveland, “Altered States: A Perspective on 75 Years of State Income Growth,” *Annual Report 2005*. For more detail, see Paul Bauer, Mark Schweitzer, Scott Shane, *State Growth Empirics: The Long-Term Determinants of State Income Growth*, Working Paper 06-06, Federal Reserve Bank of Cleveland, May 2006, <https://www.clevelandfed.org/en/Newsroom%20and%20Events/Publications/Working%20Papers/2006%20Working%20Paper.s.aspx> and then Click on the PDF for WP-06-06 by Bauer *et. al.*

<sup>20</sup> Patenting Prosperity: Invention and Economic Performance in the United States and its Metropolitan Areas Jonathan Rothwell, José Lobo, Deborah Strumsky, and Mark Muro. At \$4,300 per worker, that is \$8,600/year for a two worker household. <http://www.brookings.edu/~media/research/files/reports/2013/02/patenting-prosperity-rothwell/patenting-prosperity-rothwell.pdf> page 15.

<sup>21</sup> Global Intellectual Property Center, US Chamber of Commerce, 2012. <http://www.theglobalipcenter.com/ip-creates-jobs/>

<sup>22</sup> Based on the value of S&P 500 firms. <http://www.oceantomo.com/ocean-tomo-300/>

<sup>23</sup> Robert Litan and Hal Singer, Unlocking Patents: Costs of Failure, Benefits of Success, [http://www.ei.com/downloadables/EI\\_Patent\\_Study\\_Singer.pdf](http://www.ei.com/downloadables/EI_Patent_Study_Singer.pdf)

<sup>24</sup> See Kevin A. Hassett & Robert Shapiro, What Ideas Are Worth: The Value of Intellectual Capital And Intangible Assets in the American Economy, Sonecon (Sept. 2011) at 2, available at [www.sonecon.com/docs/studies/Value\\_of\\_Intellectual\\_Capital\\_in\\_American\\_Economy.pdf](http://www.sonecon.com/docs/studies/Value_of_Intellectual_Capital_in_American_Economy.pdf)

<sup>25</sup> [https://www.sba.gov/sites/default/files/FAQ\\_Sept\\_2012.pdf](https://www.sba.gov/sites/default/files/FAQ_Sept_2012.pdf)

<sup>26</sup>

#### Jobs of Major IT firms supporting the Innovation Act

	Worldwide	US	Outside US	% Outside US	References
Google	52,069	28,633	23,436	45.0%	<a href="http://us.greatrated.com/google-inc">http://us.greatrated.com/google-inc</a>
Cisco	75,049	36,463	38,586	51.4%	<a href="http://www.forbes.com/companies/cisco-systems/">http://www.forbes.com/companies/cisco-systems/</a> <a href="http://us.greatrated.com/cisco">http://us.greatrated.com/cisco</a>
Microsoft	99,000	59,730	39,270	39.7%	<a href="http://www.forbes.com/companies/microsoft/">http://www.forbes.com/companies/microsoft/</a> <a href="http://us.greatrated.com/microsoft-corporation">http://us.greatrated.com/microsoft-corporation</a>
Total	226,118	124,826	101,292	44.8%	

<sup>27</sup> SBIR involved firms employ about 8% of the 7,000,000 STEM workers in America. Source: Private Conversations with Ann Eskesen of the Innovation Development Institute, [www.inknowvation.com](http://www.inknowvation.com), March 2015. There are more than 500,000 STEM employees in the more than 22,000 current and former SBIR involved firms.

<sup>28</sup> Public Law, 112-29, Effective September 16, 2011, The Leahy–Smith America Invents Act (AIA), [http://www.uspto.gov/aia\\_implementation/bills-112hr1249enr.pdf](http://www.uspto.gov/aia_implementation/bills-112hr1249enr.pdf)

<sup>29</sup> Ron D. Katznelson, “The America Invents Act at Work – The Major Cause for the Recent Rise in Patent Litigation,” *IPWatchdog*, (April 15, 2013). At <http://bit.ly/AIA-Litigation>. (Explaining how changes in 35 U.S.C. §§ 299, 315(b), and 325(b) have changed lawsuit filing practices that caused the filing surge).

<sup>30</sup> [http://www.supremecourt.gov/opinions/13pdf/12-1184\\_gdhl.pdf](http://www.supremecourt.gov/opinions/13pdf/12-1184_gdhl.pdf)



<sup>31</sup> [http://www.supremecourt.gov/opinions/13pdf/12-1163\\_8o6g.pdf](http://www.supremecourt.gov/opinions/13pdf/12-1163_8o6g.pdf)

<sup>32</sup> [http://amicourip.com/publications/microsoft\\_v\\_i4i.html](http://amicourip.com/publications/microsoft_v_i4i.html)

<sup>33</sup> [http://smallbusiness.house.gov/uploadedfiles/5-21-2014\\_schmidt\\_revised\\_testimony.pdf](http://smallbusiness.house.gov/uploadedfiles/5-21-2014_schmidt_revised_testimony.pdf)

<sup>34</sup> Patent law changes in US mean there are potentially billions of dollars of write-downs on public company balance sheets, says Spangenberg, “As a result of the changes in patent law, there are billions of dollars in potential write-downs on public company balance sheets for previous acquisitions. Perhaps this will cause the financial types to speak up about how this asset class is being devalued by well-intended, but fundamentally misguided, reform and judicial activism.” January 15, 2015. <http://www.iam-magazine.com/blog/Detail.aspx?g=cc718b2d-407c-4840-a9d7-41ff77321943>

<sup>35</sup> Robert N. Schmidt, Heidi Jacobus, Jere Glover, Why ‘Patent Reform’ Harms Innovative Small Businesses, Part I of V, April 25, 2014, IP WatchDog, <http://www.ipwatchdog.com/2014/04/25/why-patent-reform-harms-innovative-small-businesses/id=49260/>.

<sup>36</sup> Robert N. Schmidt, Heidi Jacobus, Jere Glover, [Raising the Cost of Enforcing Patents: ‘Patent Reform’ Prices Small Businesses Out of the Inventing Business](http://www.ipwatchdog.com/2014/04/27/raising-the-cost-of-enforcing-patents/id=49268/), Part II of V, April 27, 2014, IP WatchDog, <http://www.ipwatchdog.com/2014/04/27/raising-the-cost-of-enforcing-patents/id=49268/>

<sup>37</sup> Robert N. Schmidt, Heidi Jacobus, Jere Glover, ‘Patent Reform’ Will Keep Small Business Inventions From Being Commercialized, Part III of V, April 28, 2014, IP WatchDog, <http://www.ipwatchdog.com/2014/04/28/patent-reform-harms-innovative-small-businesses-3/id=49276/>

<sup>38</sup> Robert N. Schmidt, Heidi Jacobus, Jere Glover, ‘Patent Reform’ Tips Power in Favor of Infringers and Against Small Businesses, Part IV of V, April 29, 2014, IP WatchDog, <http://www.ipwatchdog.com/2014/04/29/patent-reform-harms-innovative-small-businesses-4/id=49278/>

<sup>39</sup> Robert N. Schmidt, Heidi Jacobus, Jere Glover, [Why ‘Patent Reform’ Harms Innovative Small Businesses – Summary](http://www.ipwatchdog.com/2014/04/30/patent-reform-harms-innovative-small-businesses-5/id=49281/), Part V of V, April 30, 2014, IP WatchDog, <http://www.ipwatchdog.com/2014/04/30/patent-reform-harms-innovative-small-businesses-5/id=49281/>

<sup>40</sup> <http://sbtc.org/wp-content/uploads/2015/02/SBTC-Request-to-Reject-Anti-Patent-Legislation-Feb-4-2015-1.pdf>

<sup>41</sup> <http://sbtc.org/wp-content/uploads/2014/07/SBTC-Letter-to-Speaker-Boehner-Supporting-TROL-ACT-7-22-14.pdf>

<sup>42</sup> [http://sbtc.org/wp-content/uploads/2014/05/R.-Schmidt-written\\_testimony\\_HSBC.pdf](http://sbtc.org/wp-content/uploads/2014/05/R.-Schmidt-written_testimony_HSBC.pdf)

<sup>43</sup> <http://sbtc.org/wp-content/uploads/2015/01/SBTCPatentletter2pagecondensedversion.pdf>

<sup>44</sup> <http://sbtc.org/wp-content/uploads/2014/02/Letter-to-Office-of-Advocacy-regarding-Patent-Reform-2-13-2014-final.pdf>

<sup>45</sup> [http://sbtc.org/wp-content/uploads/2014/04/Advocacy-Letter-to-Senator-Landrieu-3\\_12\\_14.pdf](http://sbtc.org/wp-content/uploads/2014/04/Advocacy-Letter-to-Senator-Landrieu-3_12_14.pdf)

<sup>46</sup> Adam Mosseff, <http://truthonthemarket.com/2013/03/15/the-shield-act-when-bad-studies-make-bad-laws/>

<sup>47</sup> Adam Schwartz and Jay Kesan, Analyzing the Role of Non-Practicing Entities in the Patent System, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2117421](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117421).

<sup>48</sup> Ron D. Katznelson, “Questionable Science Will Misguide Patent Policy – The \$83 billion per year fallacy,” (February 1, 2014). Available at <http://ssrn.com/abstract=2502777>.

<sup>49</sup> The letter can be seen at: <<http://cpip.gmu.edu/wp-content/uploads/2015/03/Economists-Law-Profes-Letter-re-Patent-Reform.pdf>>.

<sup>50</sup> Kappos speech on March 13, 2015, <http://www.iam-media.com/files/Kappos%20speech.pdf> Here are some of the most important quotes:

*The recent “smartphone wars” are no more the harbinger of an inevitable innovation decline than were fights over sewing machines in the mid-1800s, the telegraph in the late 1800s, or airplanes in the early 1900s. Some reasonable level of disputes is inherent in an IP system whose success depends on flexibility, and every generation has experienced this tension.*

*The key to successful maintenance of the patent system is recognizing that it is a system of long time constants. The impact of present changes will only be realized many years down the line. Addressing today’s issues—which are real but not dire—through a massive overhaul of the system is like addressing a hangnail with an amputation: the immediate problem will be obviated, but a slew of graver, irreversible problems will arise in the solution’s wake.*

*Competition from overseas makes the consequences of bad reform that much worse. And our overseas competitors are looking on right now, not knowing whether to laugh or cry. Those seeking to copy American innovation are laughing at the prospect of the US significantly weakening its patent system and giving a leg up to our competitors. Those seeking to have their countries strengthen their IP systems so that they too can enjoy the fruits of innovation are crying because the gold standard is being undermined.*

*First and foremost, the data that the sky-is-falling alarmists are finding the hardest to swallow: an irrefutable decline in patent litigation. In 2013, reformers decried the unprecedented levels of patent litigation and built a reform narrative around “out-of-control” patent litigation, promising it would only soar to new heights unless reform was initiated, and \*now\*.*

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Well, so much for that rallying cry: every credible study of 2014 patent litigation trends has reported that, from 2013 to 2014, there was a roughly 18% decline in the total number of patent suits nationwide. Recognizing the incongruity of this trend with the 2013 narrative, the storytellers have moved the goalposts. The new focus has shifted from recent trends to a selective look-back against 2010 levels. The sleight-of-hand lies in the apples-to-oranges comparison, as the increase in the number of patent suits since then has nothing to do with an increase in actual disputes, but rather with procedural changes altering the rules for joinder brought into effect by the AIA.

The fiction of an astronomical increase in patent litigation is undermined by the facts: adjusting for procedural changes of the AIA, patent litigation at the end of 2014 was actually commensurate with 2009-2010 levels. And in a recent comprehensive study of 2014 trends, it was revealed that the number of litigants in new district court patent cases declined over 23% from 2013 to 2014, down to 16,089—the lowest level since 2009.

All this data taken together screams that the AIA is working, and that **whatever further tinkering is needed, it should take a light touch.** [Emphasis mine.]

Turning now to raw data on denied motions for attorney fees under Section 285, U.S. district courts have ruled on 924 such motions since 2008. The denial rate hovered around 60% until 2013, when it increased to 67%. But it appears Octane Fitness and Highmark may be reversing the trend. Last year only 57.6% motions were denied, and the denial rate in 2015 to date is only 48%. [Thus, we can see that in more than half the cases this year, attorney fees are already being awarded. It is hard to understand why additional legislative action is required here.]

Those concerned about fee-shifting legislation beyond what the Supreme Court has already mandated judicially point to inherent problems, such as the difficulty in identifying a “prevailing party” in the common situation where a litigant prevails on some issues but not others, and the difficulty in legislating a “reasonable fee.”

Another area where major reform is being urged is for covered customer stays. Facially, the notion that “mere users” of potentially infringing technologies should be dismissed from litigation predominantly targeting parties higher up in the supply chain seems perfectly reasonable. But there are two problems with the legislative approach. First, many technologies are highly customizable—meaning that the rigidity of a statutory fix is unlikely to adequately distinguish between infringement that is inherent in the technology (in which case a stay is appropriate) versus infringement caused by aftermarket modification (in which case the user is not properly dismissed from the action). Second, federal courts already have the authority to stay litigation against peripheral defendants. And once again the facts become problematic for the major reform narrative, as data show that courts are readily using that authority.

Hence, while hypotheticals of customers hauled into court for unwittingly using an infringing device purchased from a retailer may provide an effective lobbying tactic, the facts demonstrate no necessity for congressional action in this area.

<sup>51</sup> **Microsoft has a 93.4% Desktop Operating System Market Share, almost 17 times the 5.2% market share for Mac,** <http://www.netmarketshare.com/operating-system-market-share.aspx?qprid=10&qpcustomd=0>

<sup>52</sup> **Google has 88.1% of the global search engine market share, more than 21 times its nearest competitor at 4.13%.** <http://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines/>

<sup>53</sup> **Cisco had a 42.5% market share of the North American X86 Blade Server Market** in 2Q CY 2014.

[http://www.cisco.com/c/dam/en/us/solutions/collateral/data-center-virtualization/unified-computing/cisco\\_ucs\\_market\\_share\\_infographic\\_final.pdf](http://www.cisco.com/c/dam/en/us/solutions/collateral/data-center-virtualization/unified-computing/cisco_ucs_market_share_infographic_final.pdf)

<sup>54</sup> <http://fortune.com/author/david-j-kappos/>

<sup>55</sup> <http://www.iam-media.com/files/Kappos%20speech.pdf>

<sup>56</sup> [https://www.youtube.com/watch?v=vYKN\\_INRPO0](https://www.youtube.com/watch?v=vYKN_INRPO0)

<sup>57</sup> <http://www.ipnav.com/blog/former-uspto-head-david-kappos-patent-system-in-good-shape/>

<sup>58</sup> <http://scienceprogress.org/2013/05/software-patents-separating-rhetoric-from-facts/>

<sup>59</sup> <http://judiciary.house.gov/files/hearings/113th/10292013/Kappos%20Testimony.pdf>

<sup>60</sup> The Patent System Is A Boon -- Not A Drain -- To The American Economy Guest post written by David Kappos,

<http://www.forbes.com/sites/realspin/2014/06/10/the-patent-system-is-a-boon-not-a-drain-to-the-american-economy-2/>

<sup>61</sup> Judge Michel: Patent Reform Bills Would Weaken Patent System, IP WatchDog, October 16, 2013,

<http://www.ipwatchdog.com/2013/10/16/judge-michel-patent-reform-bills-would-weaken-patent-system/id=45709/>

<sup>62</sup> *The View from the Bench*, A Conversation with Paul Michel '66, Retired Chief Judge of the U.S. Court of Appeals for the Federal Circuit, “All the patent disputes on Capitol Hill were protecting some very specific interest, which is legitimate enough, but no one was looking at it from the standpoint of what’s good for the system, what’s good for the country, and

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what's good for the future. So I decided to leave the court in order to be free to speak out on patent reform issues and other matters.” <http://www.law.virginia.edu/html/alumni/uvalawyer/f12/michel.htm>

<sup>63</sup> Interview With Chief Judge Paul R. Michel On US Patent Reform, “I do not favor the House bill and would only favor the Senate bill if the special interest provisions were deleted.” July 14, 2011, . <http://www.ip-watch.org/2011/07/14/interview-with-chief-judge-paul-r-michel-on-us-patent-reform/>

<sup>64</sup> Former CAFC Chief Judge Michel on Patent Reform, [Judge Michel wrote a piece for IP Watchdog](#) where he argues that H.R. 1249 will torpedo patent rights. <http://www.stevenslawgroup.com/california-legal-news/michel%20on%20patent%20reform>

<sup>65</sup> Judge Michel Takes “Patent Reform” Bills To Task, In an interview with [Intellectual Property Watch](#), former Chief Judge Paul R. Michel set forth, in one place, all of the most problematic (Ed.: read, “worst”) features of the [Leahy Smith America Invents Act](#), versions of which have been passed by the House and the Senate.

The interview focuses both on the special interest features of the Senate bill such as those invalidating tax strategy patents and expanding prior user rights. He also notes the weaknesses in the House bill potentially limiting PTO full access to all the user fees it collects. He notes the flaws in the one-year grace period for inventor-generated disclosures and opposes the additional burdens on patentees imposed by post-grant review.

Wearing my patent prosecutor hat, I see little to like about this bill. Its roots are in oft-parroted but flawed analyses that suggest the U.S. economy is somehow being damaged by “flawed patents.” However, almost every feature of the bill simply makes patent protection more difficult to obtain, or weakens patent protection, for small start-ups and universities, as well as for mega-industries. Coupled with anti-patent decisions such as KSR, Bilski and Ariad, (the “jury” is still out on Prometheus, Myriad and Classen) pioneering inventions, particularly in early-stage technologies, are in for a very bumpy ride. <http://www.patents4life.com/2011/07/judge-michel-takes-patent-reform-bills-to-task/>

<sup>66</sup> <http://innovationalliance.net/from-the-alliance/letter-innovation-alliance-universities-bio-among-others-claim-opposition-current-patent-bill/>

<sup>67</sup> <http://www.rsc.org/chemistryworld/2015/03/us-universities-warn-against-patent-reform-proposals>

<sup>68</sup> <http://www.ipnav.com/blog/growing-opposition-to-the-senates-approach-to-patent-reform/>

<sup>69</sup> <http://www.aminn.org/patent-legislation>

<sup>70</sup> <http://www.patentdocs.org/2015/01/big-ten-lobbies-congress-to-tread-lightly-on-patent-reform.html> and

<http://www.aplu.org/members/councils/governmental-affairs/CGA-library/sample-big-ten-patent-letter-1-25-15/file>

<sup>71</sup> <http://thehill.com/blogs/congress-blog/technology/232699-junk-science-still-front-and-center-in-push-to-weaken-patents>

<sup>72</sup> 40 economists and law professors, <http://pdfserver.amlaw.com/nlj/patent%20march%2010.pdf>

<sup>73</sup> Patent Law Gone Awry: How Bob Goodlatte's Bill Combines Useless Rigidity With Dangerous Discretion, <http://www.forbes.com/sites/richardepstein/2015/02/13/patent-law-gone-awry-how-bob-goodlatte-bill-combines-useless-rigidity-with-dangerous-discretion/>

<sup>74</sup> Statement of Robert P. Taylor House Subcommittee on the Courts, Intellectual Property, and the Internet, Feb. 12, 2015, [http://judiciary.house.gov/\\_cache/files/84bf6fe6-a6c4-4d7f-9464-0cb5f481db7d/02.12.15-taylor-testimony.pdf](http://judiciary.house.gov/_cache/files/84bf6fe6-a6c4-4d7f-9464-0cb5f481db7d/02.12.15-taylor-testimony.pdf)

<sup>75</sup> <http://venturebeat.com/2015/02/16/innovation-act-2-0-still-misses-the-point/>

<sup>76</sup> <http://nvca.org/issues/patent-reform/>

<sup>77</sup> <http://nvca.org/pressreleases/venture-industry-raises-concerns-goodlatte-patent-litigation-reform-bill/>

<sup>78</sup> <http://fortune.com/2011/09/02/how-the-new-bid-to-reform-patent-law-will-kill-jobs/>

<sup>79</sup> [http://www.ipadvocate.org/mibj/pdfs/Lauder\\_Buck%20Stops.pdf](http://www.ipadvocate.org/mibj/pdfs/Lauder_Buck%20Stops.pdf)

<sup>80</sup> Anti-Inventor Legislation Being Proposed in Congress, FEBRUARY 19, 2015, <http://economyincrisis.org/content/anti-inventor-legislation-being-proposed-in-congress>

<sup>81</sup> BIO Statement Regarding the Reintroduction of the Innovation Act, <https://www.bio.org/media/press-release/bio-statement-regarding-reintroduction-innovation-act>

<sup>82</sup> <http://www.aminn.org/patent-legislation>

<sup>83</sup> <http://thehill.com/blogs/congress-blog/technology/232371-celebrating-inventors-day-by-protecting-strong-patents>

<sup>84</sup> [https://www.bio.org/sites/default/files/Patent\\_Reform\\_Study.pdf](https://www.bio.org/sites/default/files/Patent_Reform_Study.pdf)

<sup>85</sup> <http://www.washingtontimes.com/specials/conservative-blueprint-protecting-inventors/>

<sup>86</sup> 24 Conservative organizations have joined together to send a letter to House and Senate leadership expressing opposition to H.R. 9, the "Innovation" Act, <http://www.scribd.com/doc/258369625/Conservative-Patent-Letter>

<sup>87</sup> Patent trolls, patent thieves, and the future of innovation, Originally published by [The Hill](#), By Rep. Dana Rohrabacher (R-Calif.) and Rob Arnott, March 11, 2015, <http://conservative.org/patent-trolls-patent-thieves-and-the-future-of-innovation/>

<sup>88</sup> <http://www.iam-media.com/Blog/Detail.aspx?g=e4cd3a12-d832-489a-8349-788ae97a5955>

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- <sup>89</sup> Carly Fiorina excoriated a Republican patent reform proposal in a speech to inventors on Wednesday, comparing it to Obamacare and Dodd-Frank. 03/04/2015 <http://dailycaller.com/2015/03/04/fiorina-dont-boil-the-oceans/>
- <sup>90</sup> <http://conservative.org/road-to-cpac/rick-santorum-patent-reform-comes-at-the-expense-of-entrepreneurship-and-the-american-worker/>
- <sup>91</sup> <http://www.redstate.com/diary/setonmotley/2015/02/17/media-report-patent-trolls-think-people-protecting-private-property/>
- <sup>92</sup> <http://dailycaller.com/2014/12/04/the-conservative-case-against-patent-reform/>
- <sup>93</sup> <http://www.washingtonexaminer.com/conservatives-slam-patent-reform-as-secret-obama-gift-to-google/article/2559389>
- <sup>94</sup> <http://www.ipwatchdog.com/2015/02/24/conservatives-should-have-no-part-of-patent-reform/id=55163/>
- <sup>95</sup> <http://www.precursorblog.com/?q=content/googles-anti-conservative-values-cpac-2015-google-panel>
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- <sup>97</sup> <http://democrats.energycommerce.house.gov/sites/default/files/documents/Bill-Text-Targeting-Rogue-Opaque-Letters-2014-7-7.pdf>
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