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## Guest Post: America Invents Act Cost the US Economy over \$1 Trillion

🕒 June 8, 2015   📌 AIA Trials, IPR, PGR   👤 Dennis Crouch

By Richard Baker, President of New England Intellectual Property, LLC

The American Invents Act, passed into law in 2011, is one of the biggest changes to US patent laws in the past fifty years. Its sweeping reforms changed our system from the “First to Invent” to a “First to File” system, and created a new method for infringers to invalidate patents. While many aspects of this legislation had impacts on inventors, the most striking impact has been the devastating financial impact of the post grant review process. The post grant review process, or more specifically, the *inter partes* review (“IPR”) procedure allows any entity to request that the US Patent Office initiate a review of a valid, issued US Patent. In the two and a half years since the first IPR was filed, 77% of all patent claims reviewed have been invalidated[1].

To obtain a patent in the United States, an inventor must submit his invention to an examination process before a patent examiner. This process involves several years and often many vigorous debates between the examiner and the inventor in papers that are exchanged. If the examiner is convinced at the end of this proceeding that a patent is warranted, the US Patent Office issues a patent to the inventor. By the time a patent issues, there typically is a significant examination of the merits of the patent claims.

In essence, the IPR procedure is a request for the Patent Office to admit that they made a mistake and reverse themselves on the validity of the patent. The problem with this reversal is that the inventor has relied on the patent to build a business or to initiate licensing discussions based on his faith in the original decision of the Patent Office. This is similar to a property owner building a house based on the issuance of a deed to the property. A reversal of the patent, or of the deed, after the fact impacts the investments made in the invention.

Some have argued that the IPR procedure is weeding out the weakest patents in the United States, but experience has shown that the opposite is true. The IPR procedure is only being used against the best United States patents. This is because of pure economics. The cost for a company to file and prosecute an IPR to a decision by the Patent Trial and Appeal Board (“PTAB”) is between \$200,000 and \$500,000. No corporation can afford to file an IPR unless the patent in question is a significant threat. In fact, a review of the IPRs filed in the past month or two shows that almost every patent that is IPR’ed is involved in litigation (the few that are not in litigation are in the pharmaceutical arts). Only a small percentage of all patents are used in litigation or licensing; these patents are considered the top tier of all patents. It is these patents that are the subject of IPRs. Given the high rate of invalidation at the PTAB, most all patent litigation defenses now involve an IPR of the patents in suit.

To quantify the financial impact of the IPR proceedings in the AIA bill, we need to first assess the impact on the price of an average US patent. The lore of the US patent brokers, individuals who help inventors and companies to sell their patents, is that the price of an average US patent has dropped about 66% since the institution of the AIA IPR procedure. According to Scott

Bechtel of AmiCOUR IP Group, an experienced patent broker, "US Patents have lost 2/3rds of their value since the AIA was passed in 2011."

A bigger sampling of deal values can be found in IPOffering's Patent Value Quotient Annual Report of patent sales[2]. This report has been issued from 2012 through 2014, giving us three years of sales data to analyze. The deals listed in these reports may not represent all patent sales, as this list consist of deals large enough to be material and thus publicly reported as well as deals that brokers chose to report to IPOfferings. Furthermore, there is no readily available data from before 2012 to see deal values before the AIA was passed. However, these reports show the dramatic drop in patent values over 13,564 patent sales in 93 deals over a three year period.

<b>IPOfferings Patent Value</b>			
<b>Year</b>	<b>Dollar Sales</b>	<b>Patents Sold</b>	<b>Average Price</b>
2012	\$2,949,666,000	6,985	\$422,286
2103	\$1,007,902,750	3,731	\$270,143
2014	\$467,731,502	2,848	\$164,232
<b>2012-2013</b>	<b>-66%</b>	<b>-47%</b>	<b>-36%</b>
<b>2013-2014</b>	<b>-54%</b>	<b>-24%</b>	<b>-39%</b>
<b>2012-2014</b>	<b>-84%</b>	<b>-59%</b>	<b>-61%</b>

This chart shows a dramatic drop in the average price per patent over the three year period, with values dropping 61% from \$422,286 per patent to \$164,232. In that timeframe, the number of patents sold dropped from just under 7000 to 2800, showing a decrease in liquidity in the patent market. The overall sales dropped from \$3 Billion to well under one half billion in patent sales per year, or by 84%.

But this decrease in value of US Patents should be expected given the invalidation rate of the Patent Office's IPR proceedings. If 77% of all valid patents are canceled through this new proceeding, then the risk adjustments on patent values should also decrease by roughly the same amount. While our empirical data is showing a 60-70% drop in values, the theoretical impact should be 77%. Perhaps this is reflecting an inefficiency in the market, suggesting that patent values will drop another 10-15% in the next year or two. Or it could indicate that our samplings are not fully reflecting the actual decrease in values.

One could suggest that the *Alice v CLS Bank* Supreme Court decision also had an impact. However, the *Alice* decision only impacts software patents, and the IPOfferings numbers come from all fields. The IPOfferings numbers can be seen across three years since the AIA was implemented; *Alice* was decided less than a year ago and at first was not seen as a big change in patent law. Only in the past 4-5 months has *Alice* been expanded by the lower courts to impact

Experienced brokers are seeing that software patents with Alice issues are simply not being sold, with buyers afraid to spend anything on these patents and sellers holding until the law settles in this area. Thus we believe the IPOfferrings numbers are primarily showing the impact of the AIA IPR procedure with only a minor impact from the Supreme Court's *Alice* decision.

The decrease in value of patents means that the valuations of companies with US patent assets are also devalued accordingly. If a hypothetical company has patent assets on the books (much of which may be in Good Will if the company purchased the patents from others) at \$1 Billion from a pre-2011 acquisition, these assets should be written down to about \$390 Million based on the impact of the AIA[3].

This raises many questions on the overall impact of the AIA's IPR procedure on the United States economy. Using one methodology to evaluate the impact, we look at the US economy and approximate the impact from top down. Intellectual capital (patents, copyrights, and other forms of economic ideas are worth about \$9 Trillion in the United States[4]. So a 61% markdown of patents (and their resulting goodwill when small companies are bought) corresponds to a 61% markdown of a portion of the \$9.2 Trillion. Say patents are worth about 25% of the overall value of intellectual capital[5], or about \$2.3 Trillion, then a 61% loss in value is \$1.37 Trillion decrease in the value of the US economy based on the impact of the AIA bill. The American Invents Act bill cost the economy about \$1.37 Trillion, or an amount equal to about 7% of the US GDP.

Another way to look at the impact of the AIA starts with the count of the number of US Patents in force, about 2.1 Million according to Professor Dennis Crouch of the University of Missouri School of Law[6]. Given our 2012 IPOfferings value of \$422,000 per patent, the value of patents to the US economy was \$886 Billion. The AIA dropped the value to one third, leaving \$344 Billion in value. This one act of Congress, the IPR proceeding of the AIA bill, destroyed \$546 Billion of the US economy using this methodology.

While additional study is required to refine the macroeconomic impact of the AIA IPR procedure, it is clear that this bill has wiped out about \$1 Trillion of value in the US economy.

But this number is probably greatly underestimated, as it only incorporates the first order loss in value. It does not include lost opportunities, disincentives to innovation, the inability to raise money due to the decrease in collateral, and the loss of jobs without those investments. We leave this analysis to economists in future studies.

Given the huge impact of the AIA and its IPR proceedings on the US economy, on corporate valuations, and on the value provided to individual inventors, it is time for Congress to reevaluate this procedure to assure that a much greater percentage of patents survive the IPR process.

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[1] US Patent and Trademark Office, "Inter Partes Review Petitions Terminated to Date (as of 1/15/2015)", downloaded from [http://www.uspto.gov/sites/default/files/documents/inter\\_partes\\_review\\_petitions\\_terminated\\_to\\_date%2001%2015%202015.pdf](http://www.uspto.gov/sites/default/files/documents/inter_partes_review_petitions_terminated_to_date%2001%2015%202015.pdf) on 6 May 2015. In the proceeding where the USPTO

decided the merits of the Inter Partes Review petitions, 643 claims were found patentable and 2176 claims were found unpatentable, or 77%.

[2] IPOffering's Patent Value Quotient Annual Report is available at <http://www.ipofferings.com/patent-value-quotient.html>.

[3] Patents generated internally in a company are not valued on a corporation's balance sheets, according the US accounting rules. Only patents acquired in a purchase or a merger are included on a balance sheet.

[4] 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), 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).

[5] Robert Shapiro estimates in a private email that patents make up 25-30% of intellectual capital, but states that it varies per industry and per company. Additional research is needed to calculate this percentage more precisely.

[6] Crouch, Dennis, "How many US patents are in-force", May 4, 2012, found at <https://patentlyo.com/patent/2012/05/how-many-us-patents-are-in-force.html>.

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