



2021

## The AIA at Ten - How Much Do the Pre-AIA Prior Art Rules Still Matter?

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### Recommended Citation

2021 Patently-O Patent Law Journal 35

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# 2021 PATENTLY-O PATENT LAW JOURNAL

## The AIA at Ten - How Much Do the Pre-AIA Prior Art Rules Still Matter?<sup>1</sup>

Colleen V. Chien, Janelle Barbier, and Obie Reynolds<sup>2</sup>

As the America Invents Act (AIA) turns 10, patent students across the country may ask: if the law is already a decade old, why am I spending so much time studying pre-AIA law? Though patents filed before the transition date will remain in force up through March 2033, a good 10+ years away, teachers may also be wondering which regime to emphasize and for how long the pre-AIA rules will be considered fundamental rather than footnote material.

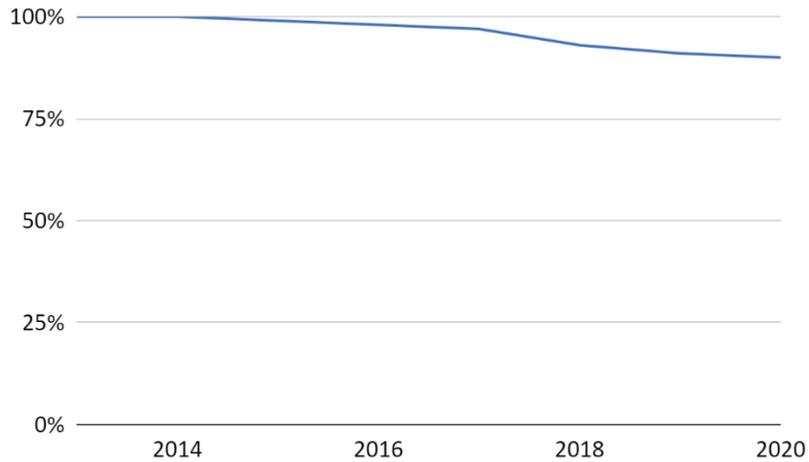
We address these questions empirically by analyzing the effective dates of patents and patent applications currently being litigated or pursued. Our analysis resoundingly confirms that both regimes matter and that the pre-AIA prior art regime appears likely to continue to be relevant for much of the next decade. But how much it matters depends. Patent lawsuits overwhelmingly continue to feature pre-AIA patents – a surprising 90% of the patent litigations initiated in 2020 included a patent with an effective filing date before March 16, 2013. (Figure 1) But the inverse is true of patent prosecution – at least 94% of applications currently pending before the USPTO in 2021, we estimate, are governed by the AIA prior art rules (Figure 2). In the paragraphs below, we explain our methods and approach and how pre- and post-AIA law are likely to both remain important for some time but why the distinction doesn't necessarily matter in the vast majority of cases.

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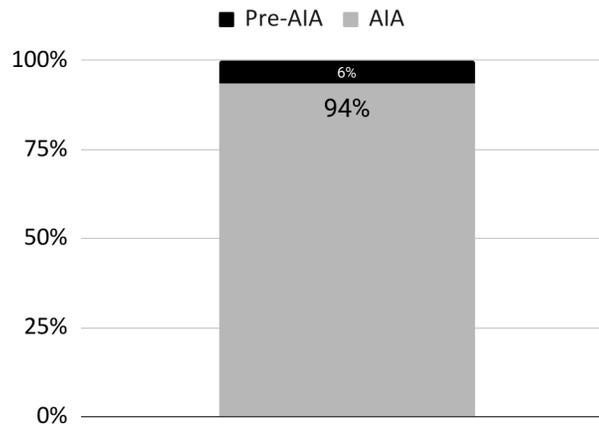
<sup>1</sup> Cite as Colleen Chien, Janelle Barbier, and Obie Reynolds, *The AIA at Ten - How Much Does the Pre-AIA Prior Art Regime Still Matter?*, 2021 Patently-O Patent Law Journal 35.

<sup>2</sup> Colleen Chien is a Professor of Law at Santa Clara University School of Law and Co-Director of the High Tech Law Institute. Janelle Barbier (MS Microbiology) and Obie Reynolds (MS Chemical Engineering) are second-year law students at Santa Clara University School of Law. We thank LaTia Brand of Harrity Analytics and the Stanford NPE Database, described in Shawn Miller et al., *Who's Suing Us? Decoding Patent Plaintiffs since 2000 with the Stanford NPE Litigation Dataset*, 21 STAN. TECH. L. REV. 235 (2018) for sharing data with us and Professor Jason Rantanen for his help with this post. Our data can be found at: <https://doi.org/10.7910/DVN/3HJ2PB>.

**Figure 1:** Percentage of Patent Litigations Including a Pre-AIA Patent, by Year of Litigation



**Figure 2:** 2021 Pending Patent Applications Pre- vs. Post-AIA



## Methods

Patents or applications (“publications”) with an effective filing date on or after March 16, 2013 are subject to the prior art rules of the America Invents Act (AIA). To estimate the share of patent litigations and prosecuted patents falling under the pre-AIA prior art regime, we obtained two sets of data: (1) patents litigated from 2013 to 2020 and (2) patent applications in active prosecution, which we sampled based on receiving an office action in May 2021. We estimated the

effective filing dates of each publication and then classified it as likely falling under the pre-AIA or AIA prior art regime. We then produced the graphs shown.

We began with a dataset of approximately ~37,000 district court cases from 2013 through 2020 sourced from Stanford's NPE database.<sup>3</sup> (We omitted ITC and PTAB cases from our analysis but note that the majority of IPR cases have a district court counterpart). After we removed design and reissued patent litigations from our analysis, about 34,000 cases remained.<sup>4</sup> Working with Harrity Analytics, we separately pulled a list of around 38,000 published patent applications that received an Office Action in May of 2021.

Under 35 USC 100(i), the effective filing date of a claimed invention is the actual filing date of the patent or a filing date based on a claim of domestic or foreign priority to which the invention is entitled. To determine whether or not a litigation included a pre-AIA patent, we estimated the effective filing date of the earliest patent in the litigation using its filing date, and, where available, the filing dates of the earliest foreign and domestic publications to which the publication claimed priority. The vast majority of the litigated patents we analyzed had actual filing dates before the transition date. A small percentage (<10%) of patents had mixed characteristics, with a filing date falling in the post-AIA era but relating back, i.e. through a priority claim, to a pre-AIA patent. In such cases, we assumed, conservatively, that the earlier date pushed the application into the pre-AIA regime, though we note that the inclusion of any single claim in the publication entitled to a post-AIA date, would make the whole publication subject to the AIA.

## Observations

We found that 10 years after the AIA was passed, as one would expect, the vast majority of applications being prosecuted (94%+) fall under the AIA regime. A small share of applications had an earlier priority claim, consistent with the vitality of continuations and priority practice. However, because we could not verify that the claims were supported by the priority documents, the 94% should be considered a lower bounds estimate for the share of applications pending in 2021 subject to the post-AIA regime.

The outcome was different among litigated patents. We found that the percentage of cases with a patent under pre-AIA law has decreased from 100% in 2013 to ~90% in 2020. (Figure 1) Because we sought to present the share of patent litigations featuring a pre-AIA patent in Figure 1, we did not deduplicate

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<sup>3</sup> See *NPE Litigation Database*, Stan. L. Sch., <https://npe.law.stanford.edu> (last visited 9/15/21).

<sup>4</sup> When multiple patents were litigated, we chose the one with the earliest filing date.

our patent list in that view, but separately ran an analysis on unique patents as a robustness check. We found the 2020 share of litigations to feature a (unique) patent that was pre-AIA to be around 87%.

Although the number of patents litigated under the pre-AIA regime is diminishing over time, the rate of change is slow and at current rates, is not expected to be less than 50% until the cohort of pre-AIA patents die their natural deaths in 2023. (It is more likely that we will see a steep cliff in the last few years before the 20-year anniversary of the AIA.) Perhaps the long tail of litigation explains this phenomenon, as some patents are not litigated until years after their issuance due to the late development or emergence of accused products.<sup>5</sup> Whatever the reason, the gradual decline suggests that pre-AIA law will remain relevant in patent litigation for a while. Moreover, pre-AIA law remains relevant across technology fields.

It is also worth noting that even though the pre- and post- AIA regimes may be different, treatment of the arguably most important forms of prior art - printed publications, patents, and published patent applications, favored in prosecution<sup>6</sup> and exclusively available in PTAB challenges - are largely the same. The differences between regimes will, once again, be more important in litigation, where, e.g. foreign non-documentary references are now relevant. Pre-AIA law geographically restricted prior art and priority filing dates but under the AIA, all categories of prior art have a global reach. This new regime also elevates claims to foreign patents. Finally, to the relief of students everywhere, priority contests are no longer part of the AIA's shift to a first-to-file system.

Understanding the differences between the two regimes is critical to accurately identifying prior art references and determining effective filing dates - students and teachers can rest assured their time is well spent discussing the nuances of each system.

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<sup>5</sup> See Brian J. Love, *An Empirical Study Of Patent Litigation Timing: Could A Patent Term Reduction Decimate Trolls Without Harming Innovators?*, 161 UNIV. PA. L. REV. 1309, 1338 (2013) (finding that practicing entities assert early and nonpracticing entities (NPEs) assert late in a patent's term and that NPEs are responsible for over eighty percent of all infringement claims litigated in the final three years of the patent term).

<sup>6</sup> See Colleen V. Chien, *Comparative Patent Quality*, 50 ARIZ. STATE L.J. 71, 118 (2018) (describing USPTO examiner reliance on patent prior art), and Colleen V. Chien, *Comparative Patent Quality and the Prior Art Gap*, October 19, 2019 Patently-O (<https://patentlyo.com/patent/2019/10/comparative-patent-quality.html>) (showing that, among a sample of patent invalidated in IPR, in only 13% of cases did examiners cite non-patent literature during prosecution)