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VIA ONLINE SUBMISSION

Re: Response of Engine Advocacy to Request for Comments on USPTO Initiatives To Ensure the Robustness and Reliability of Patent Rights, Docket No. PTO-P-2022-0025

Dear Ms. Horner, Ms. Cohan, and Mr. Tamayo,

Engine applauds the agency exploring ways to improve patent examination and increase the quality of issued U.S. patents. With this Request for Comment,<sup>1</sup> the U.S. Patent and Trademark Office (USPTO) has identified several challenges that can hinder patent quality and proposed a series of initiatives that could help remedy problems. We encourage USPTO to proceed with these and other ideas, be transparent and inclusive when launching initiatives, build-in metrics to assess which ideas work in practice, and evaluate unintended consequences.

Engine is a non-profit technology policy, research, and advocacy organization that bridges the gap between policymakers and startups. Engine works with government and a community of thousands of high-technology, growth-oriented startups across the nation to support the development of technology entrepreneurship through economic research, policy analysis, and advocacy on local and national issues. We seek to advocate for tech startup ecosystems across the country—and many of the companies we work with are patent owners while many (sometimes simultaneously) are wrongfully accused of patent infringement. We also seek to support the growth and success of

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<sup>1</sup> Request for Comments on USPTO Initiatives To Ensure the Robustness and Reliability of Patent Rights, 87 Fed. Reg. 60130 (Nov. 4, 2022) [hereinafter “Request”].

nascent companies and future startups that have not yet intersected directly with the patent system, but may in the future and still depend on innovation- and startup-friendly patent policies.

## I. Introduction & summary

Resources underpin every initiative mentioned in this Request. To promote the robustness and reliability of U.S. patents, the agency must prioritize giving examiners more time. And it should continue to develop and launch improved tools and sophisticated technology to assist examiners and applicants.<sup>2</sup> These additional resources will not be free, though, so this is also an opportune time for the agency to reassess when and how it gets its funding.

Non-patent prior art is integral to understanding whether a claim is novel and non-obvious, but these are among the resources USPTO has a difficult time accessing and deploying.<sup>3</sup> While the government has tried to bring more non-patent prior art to bear in examination, it is not readily apparent where previous efforts stand and how well they work. As the agency continues to improve the use of non-patent prior art, it should be transparent, learn from previous initiatives, and fill gaps. Any new sources of prior art need to be provided in a way that they actually get used.

Relatedly, there is an appetite for more third-party input into patent examination, but crafting meaningful, balanced procedures will be challenging. This is one (of many) areas where pilot programs might be useful. And as the agency weighs bringing third-party expertise into its work, it should: (1) look at the ways people currently engage, for example some innovators file patent applications just so they are published in places examiners easily search; (2) appreciate the resource limitations startups face and make participation accessible; and (3) make sure third-party input is meaningful—otherwise people may feel it is a waste of time and just wait to raise validity problems after issuance.

Likewise, building the framework for third-party input is one of many areas where USPTO needs to be listening to people beyond the “usual suspects.” Right now, there are limited avenues for USPTO to hear from stakeholders other than patent attorneys and patent owners.<sup>4</sup> If it wants to get the benefit of others’ expertise during examination, then it needs formal and sustained mechanisms to listen to them.

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<sup>2</sup> See, e.g., Porter Enstrom, *How Policymakers and Startups Alike Can Leverage Technology to Improve Patent Quality*, Engine (July 23, 2021), <https://www.engine.is/news/category/how-policymakers-and-startups-alike-can-leverage-technology-to-improve-patent-quality>; Drew Hirshfeld, *Artificial Intelligence Tools at the USPTO*, USPTO (Mar. 18, 2021), <https://www.uspto.gov/blog/director/entry/artificial-intelligence-tools-at-the>.

<sup>3</sup> See, e.g., U.S. Gov’t Accountability Off., GAO-16-479, *Intellectual Property: Patent Office Should Strengthen Search Capabilities and Better Monitor Examiners’ Work* (2016), <https://www.gao.gov/products/gao-16-479>. USPTO has implemented GAO recommendations on, e.g., non-patent prior art searching, but it was not readily apparent to an outside third-party where those efforts currently stand and how successful they have been.

<sup>4</sup> E.g., Abby Rives, Opinion, *USPTO Public Advisory Board Must Represent the Public*, Law360 (Oct. 6, 2022), <https://www.law360.com/articles/1537017/>.

Bringing finality to examination is another theme of this Request. There is a sense that applicants can get patents if they just wear examiners and the USPTO down.<sup>5</sup> That can undercut confidence that the agency is serving its gatekeeping function and only issuing valid patents. And where mere persistence is rewarded, that can put a thumb on the scales in favor of large companies that can afford to keep paying attorneys or those who prioritize patents (or patent assertion) over building new technology and new businesses. Instead, the agency needs the power to reject invalid claims, it must be able to devote sufficient resources to new applications, and it should permit applicants the flexibility they need to pursue patent strategies that genuinely support new innovations. Several of the Request’s initiatives could improve finality and seem like good ideas to test out.

Finally, USPTO is also right to focus on the clarity of the patent and examination record. U.S. patents have uncertain boundaries. To a certain extent, that is by design.<sup>6</sup> But when there is too much uncertainty, patents can fail to serve their public notice function and it opens doors to opportunistic behavior that stunts innovation and hurts small businesses.<sup>7</sup> For example, an applicant can tell USPTO it is claiming something specific, but turn around and send demand letters or make claims early in litigation asserting a broader scope. One way USPTO can help is by bringing more clarity to patent scope at the outset, consistent with some of the initiatives in the Request.

Overall, this Request proposes several good—and some essential—initiatives. Some will likely work, some may not, and as the agency proceeds it must monitor what happens—evaluating success using meaningful metrics and building mechanisms and structures for transparency and accountability. That said, these initiatives will not solve all the challenges facing the U.S. patent system,<sup>8</sup> and the agency should keep pushing to implement and preserve other policies that promote patent quality and confidence in the patent system.

## II. Introducing more examining time

Any effort to ensure the robustness and reliability of U.S. patents must include giving examiners more time to review applications. Everyone—patent applicants, patent owners, innovators that only encounter patents when they license technology or face infringement allegations, and the broader public—depends on examiners being able to fully vet applications, and we all benefit from confidence that the agency is issuing valid patents. Engine applauds USPTO efforts to introduce

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<sup>5</sup> E.g., Robin C. Feldman et al., *Negative Innovation: When Patents are Bad for Patients*, 39 *Nature* 914 (2021); Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 *B.U.L. Rev.* 64 (2004).

<sup>6</sup> Cf. Cesare Righi et al., *Continuing Patent Applications at the USPTO*, BSE Working Paper 1382, at 7-10 (Jan. 2023), [https://bse.eu/sites/default/files/working\\_paper\\_pdfs/1382.pdf](https://bse.eu/sites/default/files/working_paper_pdfs/1382.pdf) (addressing certain pros and cons of how applicants address uncertainty during patent prosecution, with a focus on continuations).

<sup>7</sup> E.g., Michael J. Meurer & Janet Freilich, *Patent System Often Stifles the Innovation it was Designed to Encourage*, *The Conversation* (Mar. 16, 2021), <https://theconversation.com/patent-system-often-stifles-the-innovation-it-was-designed-to-encourage-148075>; Tun-Jen Chiang, *Fixing Patent Boundaries*, 108 *Mich. L. Rev.* 523, 527-29 (2010).

<sup>8</sup> See generally Greg Reilly, *The Complicated Relationship of Patent Examination and Invalidation*, 69 *Am. U. L. Rev.* 1095 (2020) (arguing “that parts of the patentability evaluation are structurally impossible in examination,” and discussing what that means for ex ante examination and ex post invalidation).

more examining time, and we encourage the agency to monitor the success of those efforts and to continue exploring further related opportunities.

Startups are uniquely reliant on USPTO making accurate decisions when issuing patents. For startups that choose to seek patents, they face resource constraints and have to be more strategic in deciding what to patent. They cannot always hire expensive counsel, pay outside lawyers to conduct extensive prior art searching, and draft patents for every idea an engineer has.<sup>9</sup> Instead, startups have to think carefully and be selective about which patents to file. And emerging tech companies maneuvering customer discovery, market entry, and much more also have to be nimble and flexible. High-tech startups can (and often do) pivot,<sup>10</sup> taking their businesses and R&D in new and different directions—which can also mean earlier patent applications become irrelevant to the new direction.<sup>11</sup> Likewise, while big companies can afford to amass large patent portfolios around a single technology to offset the risk of any one patent being invalid, startups cannot. As such, startups that apply for patents want confidence that the patents they get are valid, and they cannot afford to waste time and money on invalid claims.<sup>12</sup> And overall startups are more likely to rely on examiners, who need sufficient time and resources to do their important work.<sup>13</sup>

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<sup>9</sup> Compare Nat Watkins, *Inside Big Tech's Race to Patent Everything*, Wired (Mar. 15, 2022), <https://www.wired.com/story/big-tech-patent-intellectual-property/>, with #StartupsEverywhere Profile: Jeff Wigb, Founder & CEO, Bryght Labs, Engine (Feb. 4, 2022), <https://www.engine.is/news/startupseverywhere-overlandpark-ks-bryghtlabs> (“[a]s a startup, we have to be really selective about our filings, and strategic about [what] we choose to patent. We cannot predict what is going to be a commercial hit. But we also cannot afford to seed 12 different patents, like a big company does, and then wait and see which of them end up working out....”), #StartupsEverywhere Profile: Rishi Ranjan, Founder & CEO, GridRaster, Engine (July 2, 2021), <https://www.engine.is/news/startupseverywhere-mountainview-ca-gridraster> (discussing different resource constraints startups face filing patents, compared to large companies).

<sup>10</sup> See, e.g., *From Instagram to Slack: 9 Successful Startup Pivots*, CB Insights (Nov. 1, 2018), <https://www.cbinsights.com/research/startup-pivot-success-stories/>; #StartupsEverywhere profile: Joshua Montgomery, Founder, Mycroft AI, Engine (Apr. 23, 2021), <https://www.engine.is/news/startupseverywhere-kansas-city-mo-mycroft> (discussing transition from makerspace to open-source voice assistant technology developer); #StartupsEverywhere Profile: Jerry Chu, CEO & Co-Founder, Loftly, Engine (Nov. 18, 2022), <https://www.engine.is/news/startupseverywhere-miami-fl-lofty> (discussing pivot); #StartupsEverywhere Profile: Jessica Charlsen, Co-Founder & Co-CEO, Job Share Connect, Engine (Apr. 1, 2022), <https://www.engine.is/news/startupseverywhere-omaha-ne-jobshareconnect> (similar); #StartupsEverywhere Profile: Nicholas Hinrichsen, Co-Founder & CEO, WithClutch, Engine (Sept. 17, 2021), <https://www.engine.is/news/startupseverywhere-sanfrancisco-ca-withclutch> (similar).

<sup>11</sup> See, e.g., Orin Herskowitz, *For Start-ups, Patents Should be a Means to an End, Not an End in Themselves*, IAM (Oct. 3, 2019), <https://www.iam-media.com/article/patents-and-start-ups> (“software start-ups’ business models often pivot many times in the early years of the company, so patents acquired may not even be relevant to the ultimate product or service years later”).

<sup>12</sup> See, e.g., *What We Heard From the Founders About Startups & Patent Policy*, Engine (July 23, 2021), <https://www.engine.is/news/category/what-we-heard-from-the-founders-about-startups-amp-patent-policy> (startup CEO conveying that, in a system where we know there are invalid patents, a desire to put his company’s own applications through a rigorous process to “know the company has ‘something concrete with our patents’”).

<sup>13</sup> Relatedly, programs like the pre-prosecution patentability assessment included in the Unleashing American Innovators Act of 2022 could provide applicants valuable information about their applications early in examination. See, e.g., *Improving Access and Inclusivity in the Patent System: Unleashing America’s Economic Engine*, Hearing Before the Subcomm. on Intellectual Property of the S. Comm. on the Judiciary, 117th Congress at 1:01:38 (2021) (testimony of Professor Lateef Mtima, Professor of Law, Howard University School of Law), <https://www.judiciary.senate.gov/meetings/improving-access-and-inclusivity-in-the-patent-system-unleashing-americas-economic-engine>. Many applicants, especially those who are newer to the patent system, may not know a lot about prior art or technical standards for patentability. That means they might waste time on ultimately-unsuccessful applications or low-quality patents, whereas giving applicants better

Startups and small businesses—including those who never apply for patents—are also uniquely reliant on USPTO to be the gatekeeper that prevents or clears out invalid claims.<sup>14</sup> For one, they are more vulnerable to unfounded infringement allegations.<sup>15</sup> Meritless cases over invalid patents force startups to waste precious time and money.<sup>16</sup> And being accused of infringing even low-quality patents affects startups in broad and sweeping ways:<sup>17</sup> it becomes harder for them to compete, gain market share, attract customers, and attract investors.<sup>18</sup> Startups report significant operational impacts, like changes in business strategy, business or business line exits, delays in hiring, and reduced valuations upon receipt of demand letters from patent assertion entities.<sup>19</sup> Ultimately, the assertion of low-quality patents can unfortunately be (and has been) the reason some startups close up shop—especially companies that cannot afford the cost or weather the duration of a patent validity challenge.<sup>20</sup> Setting aside assertion, low-quality patents create other substantial burdens and costs on innovation ecosystems. They operate like “scarecrows” that prevent would-be competitors

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information at the start of the process can help them better direct their resources and approach IP protection more strategically.

<sup>14</sup> Engine has made similar points in the past, e.g., Abby Rives & Alex Moss, *In Defence of the America Invents Act and its Impact on Startups*, IAM (Oct. 26, 2022), <https://www.iam-media.com/article/in-defence-of-the-america-invents-act-and-its-impact-start-ups>, and explored unique risks startups face in more detail, e.g., *Startups & the U.S. Patent System: Prioritizing Quality and Balance to Promote Innovation*, Engine 6-10 (July 2021), available at <https://www.engine.is/news/category/prioritizing-quality-and-balance-to-promote-innovation>.

<sup>15</sup> E.g., *id.*; Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 Berkeley Tech. L.J. 1255, 1315 (2009).

<sup>16</sup> E.g., Colleen V. Chien, *Patent Assertion and Startup Innovation*, New Am. Found. (2013), <https://www.newamerica.org/oti/policy-papers/patent-assertion-and-startup-innovation/>; Nat'l Research Council, *A Patent System for the 21st Century* 38 (Stephen A. Merrill et al. eds., 2004) (describing patent litigation as “particularly burdensome for small firms and start-ups with fewer managerial personnel and less access to capital finance”).

<sup>17</sup> Engine has made similar points in previous material. E.g., Comments of Engine Advocacy in Response to Request for Comments on Discretion to Institute Trials Before the Patent Trial and Appeal Board, Docket No. PTO-C-2020-0055, at 3-4 (Dec. 3, 2020), <https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/5fca4fad1a258d244fec7ba7/1607094191551/20.12.03+Comments+to+Docket+PTO+C+2020+0055.pdf>.

<sup>18</sup> See, e.g., *Startups Need Comprehensive Patent Reform Now*, Engine 7-14, <http://static1.squarespace.com/static/571681753c44d835a440c8b5/57323e0ad9fd5607a3d9f66b/57323e14d9fd5607a3d9faec/1462910484459/Startup-Patent-Troll-Stories1.d.pdf?format=original> (recounting startups stories); Robin Feldman, *Patent Demands & Startup Companies: The View From the Venture Capital Community*, 16 Yale J.L. & Tech. 236, 280 (2014) (investors report that an existing patent demand against a startup as a deterrent in deciding whether to invest); Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C. L. Rev. 1571, 1587-89 (2009) (describing how litigation can damage, e.g. defendants credit, relationships with customers and investors).

<sup>19</sup> Colleen Chien, *Startups and Patent Trolls*, 17 Stan. Tech. L. Rev. 461, 474-75 (2014).

<sup>20</sup> See, e.g., Engine, *Comprehensive Reform*, *supra* note 18; Amy L. Landers, *The Antipatent: A Proposal for Startup Immunity*, 93 Neb. L. Rev. 950, 979-80 (2015) (recounting examples of two former startups who won patent cases but lost market opportunities); Ethan Rothstein, *Arlington Startups Founder Testifies Before Congress About Patent Trolls*, ARL Now (Mar. 27, 2015), <https://www.arlnow.com/2015/03/27/arlington-startup-founder-testifies-before-congress/> (referring to “college students developing a product in a startup incubator who were threatened with a lawsuit by a patent troll” and “folded their company because they couldn’t even pay the licensing fee . . . that trolls ask for to avoid a lawsuit”).

from innovating in areas where invalid patents stand in the way.<sup>21</sup> Startups, in particular, may be more likely to skip R&D in the space low-quality patents improperly cover.<sup>22</sup>

Promoting the success of U.S. startups, and preventing them from the harm of invalid patents, can only happen if examiners have the time they need to truly engage with the prior art, assess the support for each claim limitation, and create a fulsome record. And each of the initiatives USPTO is exploring in this Request can only work if examiners have ample time to implement them.

As USPTO makes changes to examination time, we encourage the agency to periodically evaluate how those changes are going. For example, the agency should consider: How much additional time do examiners have to spend with each application, on average? Do examiners feel like they have enough time? Are examiners able to review and address more (relevant) prior art references? Is the additional examiner time contributing to a decrease (or increase) of total pendency? How is the additional time apparent in outcomes? Is the examination record clearer? Are fewer patents canceled by the Patent Trial and Appeal Board (PTAB) or held invalid in court?

### III. Restructuring USPTO fees

The agency does need to revisit its fee structure.<sup>23</sup> For one, additional examiner time and building other tools to ensure the robustness and reliability of patent rights will cost money. And right now, there is an imbalance around when applicants pay the agency and when the agency delivers its most cost-intensive services, which creates troubling incentives that can lead to filing and issuing low-quality patents and creates a risk the agency will not be able to cover its costs. Professors Wasserman and Frakes have offered one well-researched solution that warrants serious consideration.<sup>24</sup> The agency should consider restructuring USPTO fees to increase examination fees for large applicants, and use those fees to subsidize applications from smaller businesses.<sup>25</sup>

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<sup>21</sup> E.g., Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 Minn. L. Rev. 101, 116 (2006) (quoting *Bresnick v. U.S. Vitamin Corp.*, 139 F.2d 239, 242 (2d Cir. 1943)) (citing *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 95-96 (1993)); see generally, *id.* at 113-39 (analyzing how the “mere possession of invalid patents can injure competition”); Jay P. Kesan, *Carrots and Sticks to Create A Better Patent System*, 17 Berkeley Tech. L.J. 763, 767 (2002) (“the social costs of improvidently granted patents are numerous”).

<sup>22</sup> E.g., Fed. Trade Comm’n, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*, Exec. Summ. p.5 (2003); cf. Jean O. Lanjouw & Mark Schankerman, *Enforcement of Patent Rights in the United States*, in *Patents in the Knowledge-Based Economy* 145, 146 (Wesley M. Cohen & Stephen A. Merrill eds., 2003) (“small firms avoid R&D areas where the threat of litigation from larger firms is high”).

<sup>23</sup> Offered, in part, in response to question 11.

<sup>24</sup> E.g., Michael D. Frakes & Melissa F. Wasserman, *Decreasing the Patent Office’s Incentive to Grant Invalid Patents*, The Hamilton Project (Dec. 2017), [https://www.hamiltonproject.org/papers/decreasing\\_the\\_patent\\_offices\\_incentives\\_to\\_grant\\_invalid\\_patents](https://www.hamiltonproject.org/papers/decreasing_the_patent_offices_incentives_to_grant_invalid_patents).

<sup>25</sup> *Promoting the Useful Arts: How Can Congress Prevent the Issuance of Poor Quality Patents?: Hearing Before the Subcomm. on Intellectual Property of the S. Comm. on the Judiciary*, 116th Congress 19-20, 24-25 (2019) (testimony of Melissa F. Wasserman), <https://www.judiciary.senate.gov/imo/media/doc/Wasserman%20Testimony.pdf>. Professor Wasserman notes that “[w]hile aligning the examination fees with costs for large entities falls within the Patent Office’s grant of fee-setting authority, Congress would need to abolish the statutorily mandated examination fee discount for small and micro-entities before examination fees for these entities could be aligned with costs.” *Id.* at n.13.

When the agency thinks about fees, it has to weigh how its fees could influence applicant behavior, but over-indexing on USPTO fees as shaping or dictating the amount and direction of domestic innovation misses crucial context. First, recent USPTO elasticity estimates found that examination, issuance, and maintenance fees are inelastic, including for small and micro entity applicants.<sup>26</sup>

Second, when it comes to applying for patents, legal fees make up the majority of what applicants pay to prepare, file, and prosecute patent applications. Micro and small entities might pay in the ballpark of \$455 to \$910, respectively, in USPTO filing, search, and examination fees,<sup>27</sup> but surveys estimate that legal fees for the application run from \$6,000 to \$14,375.<sup>28</sup> Indeed, as Director Vidal recently noted, “[w]hile fees can pose a barrier to new entrants to our innovation economy, the fees charged by the USPTO are often dwarfed by the price of legal counsel.”<sup>29</sup> Expanding the pro bono program and looking to dismantle other barriers to entry in the patent system should have a more meaningful impact than prioritizing certain fee structures.<sup>30</sup> (Relatedly, Engine continues to urge USPTO to look comprehensively at the barriers underrepresented innovators face and mobilize whole government solutions to create more diverse, inclusive innovation ecosystems. That means looking beyond the patent system and tackling complex challenges with concrete steps.<sup>31</sup>)

Third, the agency needs to consider what a new fee structure would mean for the overall costs of patent examination. If examiners have more time to prepare initial Office Actions that reflect a comprehensive view of all relevant prior art, for example, that can focus applicants down on a few arguments and amendments and get to issuance of high-quality patents more quickly. And that would reduce overall legal costs. Likewise, if additional examiner time reduces pendency (which seems likely), that would save money and give startups valuable certainty about their patent portfolio sooner.

Fourth, as the agency increases examiner time and takes other steps to improve the quality of examination, that will increase confidence in the patent system—adding economic value and

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<sup>26</sup> *Fee Setting and Adjusting*, USPTO, <https://www.uspto.gov/about-us/performance-and-planning/fee-setting-and-adjusting> (“Description of Elasticity Estimates” document is available for download in the “Latest patent fee setting information” section) (last visited Jan. 29, 2023).

<sup>27</sup> E.g., Abby Rives, *How the Patent Office’s Fees are Structured — and How That Can Impact Startups*, Engine (Apr. 26, 2022), <https://engineadvocacyfoundation.medium.com/how-the-patent-offices-fees-are-structured-and-how-that-can-impact-startups-4328884f338d>.

<sup>28</sup> U.S. Gov’t Accountability Off., GAO-20-556, *Intellectual Property: Additional Agency Actions Can Improve Assistance to Small Businesses and Inventors* 16 (2020), <https://www.gao.gov/assets/710/709123.pdf>.

<sup>29</sup> Kathi Vidal, *The Unleashing American Innovators Act: Promoting Inclusive Innovation Under the New Law*, USPTO (Jan. 10, 2023), <https://www.uspto.gov/blog/director/entry/the-unleashing-american-innovators-act>.

<sup>30</sup> See, e.g., Matt O. Dhaiti, Jamie Dohopolski, & Phillip Malone, *Engine’s Response to the Call for Comments on Expanding American Innovation*, Engine (Feb. 23, 2021), <https://bit.ly/2NrnfpD>.

<sup>31</sup> See, e.g., *Startups Push Government on Diversity in Innovation*, Engine (Feb. 24, 2021), <https://www.engine.is/news/startups-push-government-on-diversity-in-innovation> (citing letter signed by 113 startups, entrepreneurs, investors, and support organizations, offering suggested steps officials can take to incentivizing private investments in underrepresented founders and making direct government funding fairer and more equitable); *Lawmakers are Right to Prioritize Diversity and Inclusion in Innovation*, Engine (Apr. 20, 2021), <https://www.engine.is/news/lawmakers-are-right-to-prioritize-diversity-and-inclusion-in-innovation>.

reducing costs throughout U.S. innovation ecosystems. As noted above, startups want to know USPTO is issuing them valid patents, and they do not want to waste their time or money on obtaining invalid patents. And if there are fewer low-quality patents out there, it means less money wasted on meritless litigation and more money going to innovation.<sup>32</sup> Patents, and the fees USPTO charges applicants, are all pieces in a much broader innovation ecosystem, and the agency should keep that in mind in assessing and recalibrating its fee structure.

Tech startups are doing so much more than paying USPTO fees, and factors outside the patent system are what truly drive the amount of innovation that takes place in the country, so preserving a fee schedule—if it hinders patent quality—makes little sense.

#### IV. Sources of prior art

The agency is right to focus on the ability of examiners to efficiently, accurately identify the most relevant prior art.<sup>33</sup> The challenges USPTO faces when it comes to searching non-patent prior art are of particular relevance to high-tech, high-growth startups. While those references (often) are not in Patents End-to-End Search,<sup>34</sup> the references are still critical to thinking about whether claims are valid.<sup>35</sup>

This is not a new problem,<sup>36</sup> and previous public and private initiatives have sought to provide patent examiners and applicants improved search capability for non-patent prior art.<sup>37</sup> The agency should take stock of those previous efforts—to identify remaining gaps and inform the success of current initiatives. For example: how large are the non-patent prior art repositories the government recently worked on,<sup>38</sup> how often do examiners search them, how often do examiners cite prior art they found in existing repositories, how often is non-patent prior art from those repositories relied on in court or PTAB proceedings to cancel invalid claims but not cited during prosecution? From there, the agency can refine existing tools and build new ones with an eye towards what actually gets used.

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<sup>32</sup> Cf. James Bessen, *The Evidence is In: Patent Trolls Do Hurt Innovation*, Harv. Bus. Rev. (Nov. 2014), <https://hbr.org/2014/07/the-evidence-is-in-patent-trolls-do-hurt-innovation> (summarizing studies showing negative impact, for example a drop in money spent on R&D and less VC invested in startups, due to patent litigation).

<sup>33</sup> Offered, in part, in response to question 1.

<sup>34</sup> It is our understanding that PE2E incorporates PubEAST, PubWEST, PatFT, and AppFT, and that the IBM bulletins are the non-patent literature included. Press Release: USPTO Launches New Patent Public Search Tool and Webpage, USPTO (Feb. 1, 2022), <https://content.govdelivery.com/accounts/USPTO/bulletins/3085d20>.

<sup>35</sup> GAO, Search Capabilities, *supra* note 3, Highlights.

<sup>36</sup> See generally GAO, Search Capabilities, *supra* note 3.

<sup>37</sup> See, e.g., Dennis Crouch, *Industry Response to White House Calls for Prior Art Examiner Training*, Patently-O (Feb. 27, 2014), <https://patentlyo.com/patent/2014/02/industry-examiner-training.html> (discussing White House effort to have private sector contribute NPL repositories); Brian Heater, MIT, *Google, Cisco and USPTO Create Prior Art Archive for Better Patents*, TechCrunch (Oct. 3, 2018), <https://techcrunch.com/2018/10/03/mit-google-cisco-and-uspto-create-prior-art-archive-for-better-patents/> (discussing public-private collaboration to build a prior art archive); Prior Art Archive, <https://www.priorartarchive.org/> (last visited Jan. 26, 2023).

<sup>38</sup> E.g., Crouch, *supra* note 37; Heater, *supra* note 37; GAO, Search Capabilities, *supra* note 3 (status of recommendations on non-patent literature marked as closed an implemented).

The agency should also look into whether and how examiners already use GitHub and other open source databases, and then establish procedures to ensure those sources are consulted for every application where it would be relevant. As Engine and others have previously noted:

open source software, like much software being produced by small developers, is an incredibly important resource for prior art searching. The communities producing these software programs are large, and the software they produce is on the cutting edge of the computer software arts. Furthermore, open source software is a resource particularly amenable for use as § 102(a)(1) prior art, because all parts of the program are freely available for public inspection.<sup>39</sup>

There are challenges to relying on these open source databases, for example confirming dates and organizing code that may be distributed across various boards and sites. However, these are not reasons to ignore valuable and highly-relevant prior art. To the extent necessary, we urge USPTO to think about what it would take to make existing open source databases useful to examiners (in addition to training examiners) and collaborate with relevant entities to build searchable resources, either within USPTO or providing support for it to be done outside the agency.<sup>40</sup>

Relatedly, any new resources USPTO develops or provides to examiners should also be available to the public, and in particular small businesses and pro se patent applicants. Right now, the agency makes many of its in-house resources available, but it largely directs the public and pro se applicants to patent prior art.<sup>41</sup> Large companies with expensive counsel and those that apply for large volumes of patents have more time and more money to conduct robust prior art searching when they draft applications. Startups and small businesses are, understandably, likely to be more reliant on USPTO resources and expertise.

Finally, here again, it is critical that examiners have ample time to review the prior art that new searches turn up.

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<sup>39</sup> Comments of Public Knowledge, Elec. Frontier Found., & Engine Advocacy, *In re* Request for Comments Regarding Prior Art Resources for Use in the Examination of Software-Related Patent Applications, Docket No. PTO-P-2013-0064, at 3 (2014), [https://www.eff.org/files/2014/03/17/comments\\_to\\_pto\\_from\\_public\\_knowledge\\_eff\\_engine.pdf](https://www.eff.org/files/2014/03/17/comments_to_pto_from_public_knowledge_eff_engine.pdf).

<sup>40</sup> *Id.* at 4-6.

<sup>41</sup> For example, USPTO resources on the basics of prior art searching emphasize USPTO patent prior art resources, *Patent Searching and Search Resources -- An Introduction*, USPTO 34-38 (last visited Feb. 1, 2023), <https://www.uspto.gov/sites/default/files/documents/Basics-of-Prior-Art-Searching.pdf>, and its pro se resources page also directs applicants to patent prior art search tools, *Filing a Patent Application on Your Own*, USPTO, <https://www.uspto.gov/patents/basics/using-legal-services/pro-se-assistance-program> (last visited Feb. 1, 2023) (the “Search for patents” link directs to *Search for Patents*, USPTO, <https://www.uspto.gov/patents/search> (last visited Feb. 1, 2023)).

## V. Third-party input

Engine commends USPTO revisiting procedures for third-party input during examination.<sup>42</sup> Technical experts and businesses working in the relevant field have valuable (and in some cases the best) information about what is really new and what disclosure is adequate to support a patent claim. Right now, the patent system relies on private third-parties to incur the cost of clearing out invalid claims after issuance. If the agency can inject some of that third-party investment earlier in the process, it could increase certainty in the system and ultimately save U.S. businesses and innovators time and money.

There is an appetite for meaningful third-party engagement in patent examination. Many startups and individuals already do (or try) to engage.<sup>43</sup> And one startup founder who has faced abusive patent assertion recently stated:

by the time you find out a bad patent has been issued, it's already being asserted by this PAE. There needs to be a window at the end of the patent process that makes it easy and very inexpensive for companies that are in the industry to challenge the patents.<sup>44</sup>

The agency is wise to look at other initiatives to bring third-party expertise into its work. However, as USPTO embarks on this process there are several features and limitations it should keep in mind.

***Weighing how third-parties currently engage.*** As USPTO considers third-party participation, it should learn from how third-parties already participate in the patent system. For example, it is increasingly common for software developers to file patent applications just to have those references published as patent prior art.<sup>45</sup> In one poll of MIT Media Lab faculty, “many wanted to patent their inventions, not to commercialize them, but simply to prevent others from doing so by ensuring patent examiners had access to the prior art.”<sup>46</sup> The agency should consider how to make this type of participation more accessible—for example, waiving filing fees for applicants who merely file to

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<sup>42</sup> Offered, in part, in response to question 5.

<sup>43</sup> *E.g., infra* (discussing how parties will file patent applications just to create prior art and the experience of some innovators sending prior art to the patent office or patent applicant during prosecution).

<sup>44</sup> *What We Heard From the Founders About Startups & Patent Policy*, Engine (July 23, 2021), <https://www.engine.is/news/category/what-we-heard-from-the-founders-about-startups-amp-patent-policy> (quoting Joshua Montgomery, Founder of Mycroft AI).

<sup>45</sup> *See, e.g.,* Elecia White, *Blocking Patents with Open Source Prior Art*, Embedded.fm (Feb. 12, 2016), <https://embedded.fm/blog/2016/2/12/blocking-patents-with-open-source-prior-art>; Mike Masnick, *Gov't Contractor Copies Open Source 3D Printing Concept . . . And Patents It*, Techdirt (June 24, 2022), <https://www.techdirt.com/2022/06/24/ridiculous-govt-contractor-copies-open-source-3d-printing-concept-and-patents-it/> (“many companies felt the unfortunate need to patent something just to avoid having someone else patent it later and create problems”); Luis Ibanez, *Defensive Patent Publications Establish the Existence of Prior Art in Any Field*, Opensource.com (Feb. 19, 2013), <https://opensource.com/education/13/2/software-defensive-patents>.

<sup>46</sup> Helen Knight, *Prior Art Archive Aims to Improve Patent Process*, MIT News (Oct. 10, 2018), <https://news.mit.edu/2018/mit-prior-art-archive-aims-improve-patent-process-1010>.

generate published, patent prior art and opening the pro bono program to open source developers who want to write patents merely for the purpose of generating easily searchable prior art.

***Acknowledging barriers to participation.*** There are barriers to third-party participation in the patent system, and initiatives to engage outside experts will need to account for them. For example:

- *Resource constraints and disparities:*
  - It will be difficult for some startups, already operating on thin margins, to participate in the prosecution of others' patents. Many startups will not be able to afford monitoring patent publications, or hiring attorneys to watch and weigh-in. USPTO receives nearly 600,000 applications each year and has over 8,000 examiners reviewing them.<sup>47</sup> Startups do not have the bandwidth to keep up with all of that. When startups do want to give the agency input, USPTO should make sure those with limited resources are still able to offer meaningful suggestions without stretching themselves too thin.
  - On the other hand, third-party initiatives implemented incorrectly could be misused to hurt startups and stunt competition. If startups are filing for patents, and their larger, established competitors can bog the patent office down with (irrelevant, tangential) material, it could slow startups down or drive up examination costs. As the agency implements third-party initiatives, it should monitor for opportunistic behavior and combat or deter it. (For example, the agency could penalize bad actors who engage in such tactics.)
- *Impact of third-party engagement:* It can be confusing, at best, and very frustrating for third-parties who have tried to help USPTO—only to see invalid patents issue anyway. If USPTO wants to have third-parties invest their time to improve examination, those contributions need to matter.

Relatedly, one founder developing open source technology—who had others come behind and try to patent her work—has spoken about how counterintuitive it can be to try and get involved in the patent system under these circumstances.<sup>48</sup> She has experience collecting the relevant prior art and talking to USPTO and at least one patent applicant about why its claims are invalid, but one of these patents still issued. There's a very understandable sense that someone should not be able to come behind you and patent your work, and scary to think about that patent being the thing that could stop you from continuing. Third-party

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<sup>47</sup> *U.S. Patent Statistics Chart*, USPTO, [https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us\\_stat.htm](https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm) (last visited Jan. 29, 2023); *Attend 2022 Patent Examiner Virtual Recruitment Open House*, USPTO (Feb. 23, 2022), <https://www.uspto.gov/about-us/events/attend-2022-patent-examiner-virtual-recruitment-open-house>.

<sup>48</sup> *What we Heard from the Founders this Patent Quality Week*, Engine (June 10, 2022), <https://www.engine.is/news/category/what-we-heard-from-startups-this-patent-quality-week>; *Stories*, Patent Pandas, <https://patentpandas.org/new-page> (last visited Jan. 29, 2023).

initiatives could be one way to provide people in these situations with meaningful, accessible solutions.<sup>49</sup>

- *Incentives against third-party engagement:* A third-party who knows about good prior art might be reluctant to submit it during prosecution if the reference will not receive complete consideration by USPTO. That third-party might feel like they are sacrificing important invalidity arguments, which will matter if that patent is later asserted in litigation.<sup>50</sup> If a third-party thinks that a court or the PTAB will give references closer consideration, in a context where the third-party is a more active participant, it might decide to wait. If examiners can carefully consider all third-party input, and inject more finality into prosecution, that could help overcome some disincentives to participation.
- *Examiner time:* Accepting and truly factoring third-party expertise during patent examination is yet another reason examiners need more time and resources. The agency might want to structure some initiatives for third-party input through the lens of equipping an examiner with the information she thinks she needs from third-parties to aid her work.

***More than just submitting prior art.*** As the agency revisits old and builds new initiatives to get third-party input, it should not limit third-parties to just submitting prior art. There may be ways to bring in third-party expertise, as well, for example leveraging peer review to evaluate validity.<sup>51</sup> And the agency should consider pre-grant adversarial processes that are less expensive than post-grant review (PGR).<sup>52</sup> As USPTO has in the past, it should remain open to testing ideas through pilot programs.<sup>53</sup>

***Crafting third-party engagement requires input from outside advisors.*** As USPTO considers how to improve third-party participation in patent examination, that highlights one of many reasons the agency needs to hear from more outside stakeholders on a regular, sustained basis.<sup>54</sup> Right now, the agency has several obvious channels to communicate with some of its stakeholders, but little-to-no avenues to hear from others. And many of the third-parties who could help improve examination fall into the later bucket. While there are scores of reasons why USPTO needs to listen to all of its stakeholders—including innovators who have not (yet) applied for patents, entrepreneurs and small

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<sup>49</sup> See also, e.g., Masnick, *supra* note 45 (discussing another situation where open source developers had someone later apply for a patent on their idea).

<sup>50</sup> See, e.g., Paul A. Calvo & Lori M. Brandes, *Third Party Submissions in the U.S.: What You Need to Know*, Sterne Kessler (Sept. 2018), <https://www.sterneessler.com/news-insights/publications/third-party-submissions-us-what-you-need-know> (discussing pros and cons of third-party prior art submission, including the lack of participation and potential estoppel implications).

<sup>51</sup> See, e.g., Lisa Larrimore Ouellette, Pierson, *Peer Review, and Patent Law*, 69 Vand. L. Rev. 1825 (2016).

<sup>52</sup> See, e.g., Engine, *What We Heard*, *supra* note 44 (quoting startup CEO suggesting “window at the end of the patent process that makes it easy and very inexpensive for companies that are in the industry to challenge the patents”).

<sup>53</sup> Ouellette, *supra* note 51, at 1842; see also, generally, Colleen V. Chien, *Rigorous Policy Pilots the USPTO Could Try*, 104 Iowa L. Rev. Online 1 (2019) (discussing possible policy pilots).

<sup>54</sup> See, e.g., Rives, *Public Advisory Board*, *supra* note 4; *Integrating Public Voices Into the Patent System: A Blueprint for Reforms*, I-MAK, <https://www.i-mak.org/public-participation-blueprint/> (last visited Feb. 1, 2023).

businesses who never intentionally interact with the patent system, and the broader public—crafting third-party initiatives is one area those voices could help improve examination work.

***Monitoring & evaluating third-party engagement.*** The agency should measure and assess any third-party initiatives it launches in a transparent fashion. That could include collecting and publishing data about: how many third-parties participate, which types of third-parties engage, and what type of input they offer (prior art, other evidence and arguments, subject matter expertise)? The agency should also monitor whether there is more third-party engagement in some art units. And the agency should seek to evaluate how third-party input impacts ultimate outcomes: are patents with third-party input issued or rejected more often? How do those patents fare in litigation or PTAB review? Finally, the agency should consider whether small businesses are able to participate, or if third-party input is just something that big companies and patent attorneys do.

## **VI. Bringing some finality to examination**

The theme of finality underpins much of this Request.<sup>55</sup> As USPTO engages in this and other work to ensure the robustness and reliability of patent rights, it should continue to assess the need for finality in patent examination and balance it against legitimate and reasonable needs for applicant flexibility.

Right now, there is a sense that applicants who can afford it can basically keep filing similar claims and making similar arguments to the agency in hopes that the agency will effectively capitulate and issue patents and expand patent portfolios.<sup>56</sup> When large, wealthy companies can keep patent families alive and growing for years, that diverts the agency's resources away from other activities (including review of new applications from those with fewer resources) and it risks driving the agency towards issuing lower quality patents. As one startup founder put it, based on his experience applying for patents, he was told the strategy is:

you just keep appealing, and ultimately the patent office runs out of resources and gives you the patent. While I couldn't believe that, it seems the strategy is still being used today, and that is why we have so many low-quality patents. One easy fix is to put a limit on continuations, appeals.<sup>57</sup>

USPTO should be able to reject invalid claims, and then free up examiner time and agency resources to focus on vetting new applications. As above, applications from smaller applicants or those who

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<sup>55</sup> Offered, in part, in response to questions 2-5.

<sup>56</sup> See, e.g., *infra* note 57; Lemley & Moore, *supra* note 5; see also, e.g., Michael D. Frakes & Melissa F. Wasserman, *Does the U.S. Patent and Trademark Office Grant Too Many Bad Patents? Evidence from a Quasi-Experiment*, 67 *Stan. L. Rev.* 613 (2015) (study suggesting a bias toward allowing patents, particularly in technology areas where there is a history of high repeat filing rates).

<sup>57</sup> Engine, *Patent Quality Week*, *supra* note 48 (quoting Todd Moore, CEO and Founder of TMSOFT).

are newer to the patent system would benefit from full examiner attention. And this is especially true as the agency embarks on new programs, like the pre-patentability assessment program.<sup>58</sup>

## VII. Continuation practice

The Request proposes some promising ideas to manage continuation practice.<sup>59</sup> While there are circumstances that warrant something like a continuation application, there are also reasons to reform and reign-in the rapidly increasing use of continuations.<sup>60</sup>

Continuations can be used to change the scope of patent protection over an invention,<sup>61</sup> creating uncertain boundaries around what is covered by patents and what space is free to other innovators.<sup>62</sup> That, in turn, hurts our patent disclosure goals and blocks competition.<sup>63</sup> It also allows “patentees to capture new insights by competitors through ex post claiming.”<sup>64</sup> Indeed, as one example, studies “suggest widespread use of continuations to seek new patents that are infringed by already-published standards.”<sup>65</sup> Studies also suggest that PAEs are heavy users of continuing applications.<sup>66</sup>

As the FTC described it:

Continuation practice can allow opportunistic behavior, such as post-filing modification of patent claims to capture competitors’ products or processes that would not have infringed the original claims. Such opportunistic behavior can disrupt competitive activity. It wastes inventive resources that a competitor could have redirected, had it fully known the scope of an applicant/patentee’s claims. It imposes redesign costs that might have been avoided if the competitor had had greater lead time. It fosters high royalties, inflated by a competitor’s exposure to operational disruption from injunctive relief after sunk investments have been made. It magnifies potential competitors’ risks and reduces their incentive to develop substitutes for the patentee’s invention. Moreover, competitors’ uncertain ability to predict from the written description at 18 months what the patentee ultimately will claim limits any opportunity to anticipate and avoid this exposure. Such behavior wastes resources,

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<sup>58</sup> Unleashing American Innovators Act of 2022.

<sup>59</sup> Offered, in part, in response to questions 2, 5, 8-10.

<sup>60</sup> Remy Yucel, *FY21 Pendency Stats Review*, USPTO 7 (Nov. 18, 2021), <https://www.uspto.gov/sites/default/files/documents/20211115-PPAC-FY21-pendency-stats-review.pdf> (showing continuations have tripled in the past decade).

<sup>61</sup> See, e.g., Righi, *Continuing Applications*, *supra* note 6, at 5.

<sup>62</sup> Chiang, *supra* note 7.

<sup>63</sup> E.g., Righi, *Continuing Applications*, *supra* note 6, at 39.

<sup>64</sup> Chiang, *supra* note 7, at 545; see also, e.g., *Continuation Patent Applications: 10 Reasons You Should Consider Filing*, Nutter (May 1, 2017), <https://www.nutter.com/ip-law-bulletin/continuation-patent-applications-10-reasons-you-should-file> (“Continuation applications can also be used offensively. For example, one can file a continuation with claims covering a competitor’s product as long as it is described in the original parent application.”).

<sup>65</sup> Cesare Righi & Timothy Simcoe, *Patenting Inventions or Inventing Patents? Continuation Practice at the USPTO*, NBER Working Paper 27686, at 3 (Feb. 2022), [https://www.nber.org/system/files/working\\_papers/w27686/w27686.pdf](https://www.nber.org/system/files/working_papers/w27686/w27686.pdf).

<sup>66</sup> Righi, *Continuing Applications*, *supra* note 6, at 5.

raises costs and risks, and potentially deprives consumers of the benefits of innovation and competition.<sup>67</sup>

Here again, reviewing continuations also diverts examiner time away from other things, including new applications. And this would tend to favor larger applicants, who collectively file upwards of 80,000 continuations each year in recent history.<sup>68</sup>

It appears continuation practice today is not fulfilling the goals of the patent system and it warrants change. In this Request, USPTO has proposed some ideas that could help. As it implements any modifications to continuation practice, the agency should monitor how those changes play out, including how it impacts things like examiner time and pendency, and how it impacts measures of patent quality, rates of litigation, and rates of invalidity. Finally, it may be that certain changes to continuations need to come from other policymakers, including Congress. But we applaud USPTO thinking about how it can improve clarity and notice in the patent system, curtail gamesmanship and abuse, and preserve the flexibility needed so that the patent system can support innovation.

### **VIII. Support for patent claims**

The Request also proposes promising ideas to encourage applicants and examiners to explain where claim limitations find support in the (relevant) specification.<sup>69</sup> Examiners and applicants should always do a robust § 112 analysis on every patent claim. Applicants will have (or should have) already identified where each limitation finds support, and it would save the rest of the patent system time and money to allow others to turn to the applicant's diligence. Nudges for the applicant to provide this information to the examiner would be helpful and add clarity to the prosecution record.<sup>70</sup> However, examiners still need ample time to read each application and should conduct their own independent § 112 analysis. Direction from the applicant cannot be a substitute for the examiner's own work, expertise, and thorough review.

### **IX. Enhancing clarity in the record**

USPTO could improve the notice function of patents by encouraging more clarity—and documenting it—during examination.<sup>71</sup> This would instill more confidence in the quality of issued patents, inject certainty in the market about what a patent covers, and foster innovation by those willing to invest in, e.g., design-arounds. It could also curtail some opportunistic, harmful behaviors.

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<sup>67</sup> FTC, *supra* note 22, at Ch.4, p.26-31.

<sup>68</sup> *Cf.* Yucel, *supra* note 60, at 8 (noting the ratio between large and small entity filings general matches the ratio in overall filings, while micro entities are underrepresented).

<sup>69</sup> Offered, in part, in response to questions 2, 5.

<sup>70</sup> *Infra* part IX.

<sup>71</sup> Offered, in part, in response to question 5.

Some patent owners try to game the system, strategically shifting their theory about a patent's scope before and after a patent issues.<sup>72</sup> This allows a fluid approach to assertion,<sup>73</sup> which in turn makes litigation more expensive and exposes more startups and small businesses to the risk that a single dubious patent gets asserted against them. As one startup GC recently put it:

When the PTO gives you a patent, they think they are giving you something narrow . . . . But then [a patent assertion entity can] manipulate[] it to something completely different.<sup>74</sup>

For example, a patent directed to online loan processing and credit reporting has been asserted against over 1,000 small businesses under the theory that its claims encompass any website with customer log-ins, privacy practices, shopping carts, or e-commerce functions. As the Office of Washington State's Attorney General put it, "any business with a web presence is a potential target" for this "vaguely worded" patent which relates specifically to loan processing and credit reporting.<sup>75</sup>

Likewise, some patent owners will argue for narrow claim constructions early in a case to survive eligibility or validity challenges, but then later reverse course and seek more expansive scope when they have to prove infringement.<sup>76</sup> In *Data Engine Technologies LLC v. Google LLC*,<sup>77</sup> near the end of the case the patent owner argued a preamble was not limiting, when earlier in the case it had urged the court to emphasize preamble language. The Federal Circuit, rejecting the argument, pointed out how the patent owner was "effectively seek[ing] to obtain a different claim construction for purposes of infringement than [the court] applied, at [the owner's] insistence, in holding the asserted claims [] eligible."<sup>78</sup>

If there were more clarity and explanation in a patent's prosecution history, courts and parties could avoid these problems. To get there, USPTO could, e.g., encourage patent applicants to take clearer positions about claim construction earlier in examination, and examiners could write short

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<sup>72</sup> Engine has made similar points in previous material. *E.g.*, Engine, *Startups & the U.S. Patent System*, *supra* note 14, at 6-10.

<sup>73</sup> Greg Reilly, *Patent "Trolls" and Claim Construction*, 91 Notre Dame L. Rev. 1045 (2016).

<sup>74</sup> Engine, *Patent Quality Week*, *supra* note 48 (quoting Shirley Paley, GC of Formlabs).

<sup>75</sup> Press Release: AG Ferguson Files Lawsuit Against "Patent Troll" Targeting Small Businesses (May 14, 2021), <https://www.atg.wa.gov/news/news-releases/ag-ferguson-files-lawsuit-against-patent-troll-targeting-small-businesses>.

<sup>76</sup> Engine has made similar points in previous material. *E.g.*, Teresa S. Chen, Bryan A. Ramirez, & Mason Kortz, Response of Engine Advocacy Regarding Patent Subject Matter Eligibility Guidance, Docket No. PTO-P-2022-0026 (Oct. 15, 2022), [https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/634d4de3afad0416b933bf2f/1666010595628/2022.10.15\\_Engine+Eligibility+Guidance+Comments.pdf](https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/634d4de3afad0416b933bf2f/1666010595628/2022.10.15_Engine+Eligibility+Guidance+Comments.pdf).

<sup>77</sup> 10 F.4th 1375 (Fed. Cir. 2021).

<sup>78</sup> *Id.* at 1381. *See also, e.g.*, *CardioNet, LLC v. InfoBionic, Inc.*, No. 2020-2123, 2021 WL 5024388, at \*4 (Fed. Cir. Oct. 29, 2021) (The district court had observed that "when making its infringement argument, CardioNet had emphasized the operator's role in activating the T wave filter, but that, problematically, when making its eligibility argument (at an earlier stage in the proceedings), it had downplayed that aspect of the claim. The court strongly hinted that, had it been aware of the significance of the operator's mental process to the claimed invention at the pleadings stage, it would have considered holding the claims ineligible under § 101.") (citations omitted)

statements about claim scope in the notice of allowance.<sup>79</sup> More attention to § 112, as discussed above, would also help.<sup>80</sup>

As it implements new trainings, as well as any later initiatives around clarity,<sup>81</sup> USPTO should monitor and adjust as warranted. For example, it should measure how examiner behavior changes after training; evaluate any evolution in how the prosecution record is used in litigation and PTAB proceedings to assess scope, validity, and infringement; calculate (or approximate) the impact of clarity on the amount and cost of patent litigation; and consider other metrics that reveal the practical implications of clarity interventions.

Finally, the agency should be transparent and open about the new training examiners receive. And it should make the same (or similar) training materials about clarity available to startups and small businesses—especially those who might be drafting applications themselves.

## **X. Communication between examiners and the Patent Trial and Appeal Board**

We applaud USPTO creating internal feedback loops and facilitating information sharing between the PTAB and examining corps, so that the agency can learn from the PTAB's experience.<sup>82</sup> “Lessons learned” after PTAB proceedings could inform improvements to other, upstream USPTO processes. As it does this, the agency should consider what it can adapt from, e.g., the principles of Agile development.<sup>83</sup> For example, after a PTAB decision which canceled invalid claims, USPTO could convene a conversation with the relevant examiners, PTAB judges, and others. Those conversations could identify ways to improve examination, find prior art that was missed, or craft processes for assessing invalidity arguments that did not come up in examination but were convincing to the PTAB. These conversations could also help examiners see the tactics certain patent owners use to expand the scope of patents after issuance, and inform efforts to increase clarity in the record to combat related harms.

\* \* \*

Thank you again for the opportunity to provide these comments. We appreciate USPTO's interest in and efforts to support technology and innovation in the U.S. High-growth, high-tech startups are an essential component of our innovation economy, and we encourage the Office to continue to weigh their interests as it implements these and other ideas to enhance patent quality and promote

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<sup>79</sup> R. Polk Wagner, *Understanding Patent-Quality Mechanisms*, 157 U. Penn. L. Rev. 2135, 2165-68 (2009).

<sup>80</sup> *Supra* part VIII.

<sup>81</sup> Request at 60131 (discussing AIPLA and IPO training & a subsequent RFC).

<sup>82</sup> Offered, in part, in response to question 5.

<sup>83</sup> *E.g.*, *5 Reasons Why Feedback is Important to Agile*, Coveros (Feb. 17, 2020), <https://www.coveros.com/5-reasons-why-feedback-is-important-to-agile/>; Yvette Francino & James Denman, *Agile Retrospective*, TechTarget (Oct. 2021), <https://www.techtarget.com/searchsoftwarequality/definition/Agile-retrospective>.

the robustness and reliability of patent rights. Engine remains committed to engaging with USPTO on these and other important issues.