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Consistent Inconsistency: BASF v. SNF & the Licensing Exception to 35 U.S.C. § 102 (B)'s On-Sale Bar

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Cover Page Footnote

Special thanks to Professor David Shipley for his feedback and advice in sponsoring this note. Thanks also to Charles Turner for his feedback and edits as well as to James W. Dabney of Hughes Hubbard & Reed, LLP, whose work on the BASF v. SNF case informed the ideas presented herein.

***CONSISTENT INCONSISTENCY: BASF V. SNF &
THE LICENSING EXCEPTION TO 35 U.S.C. § 102
(B)'S ON-SALE BAR***

*James Cameron Durham**

* Special thanks to Professor David Shipley for his feedback and advice in sponsoring this note. Thanks also to Charles Turner for his feedback and edits as well as to James W. Dabney of Hughes Hubbard & Reed, LLP, whose work on the *BASF v. SNF* case informed the ideas presented herein.

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I. INTRODUCTION

Inventors procure patents from the U.S. Patent and Trademark Office (“USPTO”) to secure exclusive rights over their inventions.¹ These rights ensure that the inventor can profit from the invention, at least for a fixed period (typically 20 years).² Enjoyment of these rights depends on the fact that the invention, at the time of filing, is truly novel.³ In service of the novelty requirement, the “on-sale bar” limits patentability. The on-sale bar doctrine—codified at 35 U.S.C. § 102(b)—prevents inventors from patenting inventions that were “*on[-]sale in this country*” more than one year prior to the date of the application for patent in the United States.⁴ Both before and after the Leahy-Smith America Invents Act (“AIA”),⁵ the principal function of the “on-sale” bar is preventing commercial exploitation—inventors offering their invention to the public through sale then excluding the public through a patent.⁶

The on-sale bar balances two important interests: (1) inventors’ ability to realize the profit of their investment and (2) limitations on patent holders’ monopoly.⁷ As a result, an alleged infringer may challenge a patent’s validity on on-sale bar grounds by demonstrating clear evidence of a sale or offer for sale anticipating the claimed invention one year before the subject patent’s application.⁸

Case law further establishes that an “invention” under the Patent Act (1952) “refers to the inventor’s conception rather than to a physical embodiment of that

¹ 35 U.S.C. § 154(a)(1).

² 35 U.S.C. § 154(a)(2).

³ 35 U.S.C. § 102(a).

⁴ 35 U.S.C. §102(b) (pre-AIA) (emphasis added).

⁵ See Manual of Patent Examining Procedure (MPEP), § 2151 (9th ed. Rev. 10.2019, June 2020) (explaining that the Leahy-Smith America Invents Act (“AIA”), for patent applications after March 16, 2013, switches the U.S. patent system from a “first to invent” to a “first inventor to file” system, eliminates interference proceedings, and develops post-grant opposition).

⁶ STX, LLC v. Brine, Inc., 211 F.3d 588, 590 (Fed. Cir. 2000).

⁷ See *In re Cavaney*, 761 F.2d 671, 676 (Fed. Cir. 1985) (“[T]he ‘on[-] sale’ bar has the following underlying policies: (1) a policy against removing inventions from the public domain which the public justifiably comes to believe are freely available due to commercialization; (2) a policy favoring prompt and widespread disclosure of inventions to the public; and (3) a policy of giving the inventor a reasonable amount of time following sales activity to determine whether a patent is worthwhile.” (citing *Gen. Elec. Co. v. United States*, 654 F.2d 55, 62 (Cl. Ct. 1981))).

⁸ See *Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1045-46 (Fed. Cir. 2001) (quoting *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987)).

idea.”⁹ That conception is “the subject of a commercial offer for sale”¹⁰ for purposes of the on-sale bar if it meets two conditions: “First, the product must be the subject of a commercial offer for sale” that is not primarily for experimental use.¹¹ “Second, the invention must be ready for patenting.”¹² Such readiness may be shown by a reduction to practice or proof that the inventor had prepared drawings or descriptions specific enough to permit someone skilled in the art to practice the invention.¹³ For example, in *Pfaff v. Wells Electronics, Inc.*, providing detailed drawings and know-how, coupled with accepting purchase orders, established that the invention was ready for patenting and, thus, rendered the yet-to-be-produced product “on-sale.”¹⁴ Federal Circuit precedent has also clarified, for § 102 purposes, that the term “commercial offer for sale,” “analyzed under the law of contracts[,] [is to be] generally understood”¹⁵ as “[a sale when] the other party could [enter] into a binding contract by simple acceptance, assuming consideration”¹⁶ While applying a licensing exception to the on-sale bar is a “well-established principle,” the Federal Circuit’s decision in *BASF Corp. v. SNF Holding Co.* promotes inconsistency by diverging from the Supreme Court’s conception of a commercial sale established under *Pfaff*.¹⁷ The Federal Circuit’s arbitrary discrimination between classes of invention threatens the stability of the United States patent system through premature commercial exploitation.

Part II of this Note will analyze the current legal framework surrounding §102(b)’s licensing exemption. Part III seeks to accomplish two tasks: First, it will argue that the Federal Circuit’s decision in favor of *BASF* misinterprets both the statute and the established understanding of an “invention” under the

⁹ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 60 (1998); 35 U.S.C. § 100.

¹⁰ *Pfaff*, 525 U.S. at 67; *see also* *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1353 (Fed. Cir. 2002) (“If there is adequate proof that a device was sold primarily for experimentation, the first prong of *Pfaff* would not have been met and it would be unnecessary to consider either whether the device was an embodiment of the claimed invention or whether the invention was ‘ready for patenting’ at the time of the sales.”).

¹¹ *Pfaff*, 525 U.S. at 67.

¹² *Id.*

¹³ *Id.* at 67-68.

¹⁴ *Id.* at 68.

¹⁵ *Group One, Ltd. v. Hallmark Card, Inc.*, 254 F.3d 1041, 1047 (Fed. Cir. 2001).

¹⁶ *Id.* at 1048; *see* *Linear Tech. Corp. v. Micrel, Inc.*, 275 F.3d 1040, 1050 (Fed. Cir. 2001) (“An offer is the manifestation of willingness to enter into a bargain, so made as to justify another person in understanding that his assent to that bargain is invited and will conclude it.” (quoting RESTATEMENT (SECOND) OF CONTRACTS § 2.4 (AM. L. INST. 2022))); *Fisher-Price, Inc. v. Safety 1st, Inc.*, 109 Fed. App’x 387 (Fed. Cir. 2004) (holding that to trigger the on-sale bar an “offer” must communicate an intent to be bound and be capable of being turned into a contract by mere acceptance).

¹⁷ *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 970 (Fed. Cir. 2020).

common law. Second, it will outline the need for developers and users of licensed technology in the chemical industry to receive protection in the sale of intangibles, including process inventions, as established under *Pfaff v. Wells Electronics, Inc.* Part IV of this Note suggests that future cases involving patented processes and prior art should be based on the understanding that transmission of a process description to a user with the ability to perform that process fulfills 35 U.S.C. § 102(b)'s "on-sale" bar for purposes of determining novelty.

II. BACKGROUND

*BASF Corp. v. SNF Holding Co.*¹⁸ must be analyzed in light of the Federal Circuit's view that, under § 102(b), mere license of the right to practice an invention is not "commercial marketing" under § 102(b) unless, and until, a tangible product is made and placed on-sale.¹⁹ While claimed as a "well-established principle," this doctrine has been continuously debated, with two primary schools of thought developing around the question of licensing.

A. THE *KOLLAR*/GROUP ONE EMBODIMENT STANDARD

Receiving further development in *In re Kollar*, the foundations for a licensing exception, which centers around the embodiment of a claimed invention, were first outlined in *Group One v. Hallmark* one year prior.²⁰ In *Group One*, Judge Lourie, in his concurrence, articulated the court's perceived distinction between a sale and a license, making a licensing exemption to §102(b)'s on-sale bar necessary:

[A] license under a patent is not usually a sale of the patented product, and the statute bars a sale, not a license. A license is analogous to granting or waiving rights under *the patent*, which is distinct from selling *the machine* covered by the patent. A patent license, if it is non-exclusive, is an agreement to forbear from suit. If the license is exclusive, it may be tantamount to an assignment of the patent. In neither case is the invention of

¹⁸ *Id.* at 958; 35 U.S.C. § 102(b).

¹⁹ Roderick M. Thompson, *The Licensing Exception to the On-Sale Bar: A Wrong Turn on the Path to Predictability*, 45 IDEA 35, 39 (2004).

²⁰ *Group One*, 254 F.3d at 1041.

the patent necessarily on[-]sale when the license is executed.²¹

Lourie further cites potential adverse effects on the patent system if licensing agreements were considered to qualify as commercial offers for sale.²² He reasons that because the grant of licenses often precedes the commercial sale of an embodiment of the invention, “*many patents would be invalidated long before the invention itself is put on[-] sale.*”²³ Thus, in *Group One*, the lack of definite terms, such as price and date of delivery in correspondence between the patentee and alleged infringer over a year before the patent application date, was dispositive of a commercial offer to sell.²⁴ In short, “[*t*]he law does not start the on-sale bar clock running when a license to an invention is executed.”²⁵

In re Kollar revisits the precept that a sale of “know-how” regarding a process and how it is carried out does not trigger the on-sale bar.²⁶ Expanding upon Lourie’s concurrence in *Group One*, the Federal Circuit held that a licensing agreement for the process of preparing dialkyl peroxide²⁷ was not a “sale” because the transaction was not about carrying out or performing the process.²⁸ Lourie, however, was careful to distinguish the concept of a “shrink-wrap license,” wherein a working product is “just as immediately transferred to the ‘buyer’ as if it were sold”²⁹ and the sale of the license is “tantamount” to a sale of the final product.³⁰

²¹ *Id.* at 1052-53 (Lourie, J., concurring).

²² *Id.* at 1053.

²³ *Id.* (emphasis added).

²⁴ *Id.* at 1052.

²⁵ *Id.* (emphasis added).

²⁶ *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002).

²⁷ See, e.g., *Luperox® dialkyl peroxides*, ARKEMA

<https://www.arkema.com/global/en/products/product-finder/product-range/organicperoxide/luperox/luperox-dialkylperoxides/> (last visited Oct. 8, 2022)

(“[D]ialkyl peroxides are initiators for high polymers and efficient crosslinking and viscosity modifiers for polyolefins, or vulcanizing agents for elastomers.”); see also *Polyolefins*, PLASTICS EUR., <https://plasticseurope.org/plastics-explained/a-large-family/polyolefins-2/> (last visited Oct. 27, 2022) (defining polyolefins as macromolecules formed by the polymerization of polyolefin monomer units (e.g., polypropylene, polyethylene) prevalent in a wide array of applications depending on the material characteristics of the polymer, most notably consumer plastics); *Elastomers: what are they, types and applications*, INFINITIA INDUS. CONSULTING (July 8, 2021), <https://www.infinitiaresearch.com/en/news/elastomers-what-they-are-types-and-applications/> (defining elastomers as rubber-like solids with elastic properties).

²⁸ *In re Kollar*, 286 F.3d at 1332.

²⁹ *Group One*, 254 F.3d at 1053.

³⁰ *Id.*

Lourie's conception of a "shrink-wrap license" was further explored in *Minton v. Nat'l Ass'n of Securities Dealers, Inc.*³¹ In *Minton*, the inventor conveyed to a lessee a fully operational computer program implementing, and thus embodying, the patent method claimed for interactive securities trading along with a warranty of workability, which enabled the lessee to practice the invention.³² The Federal Circuit held that the sale of a license qualified as an "offer for sale" within the meaning of the on-sale bar.³³ Writing for the majority, Judge Lourie reasoned that the license of process in *Minton* was distinguishable from that in *Kollar*, as it not only conveyed "know-how" but also a fully operational computer program embodying the claimed method and a warranty of workability.³⁴ In addition to the conveyance of the product itself, under this approach, the Federal Circuit has also held that the performance of a method invention for consideration may also trigger the on-sale bar.³⁵

Citing *Group One* and *Kollar*, the Federal Circuit in *Elan Corp. v. Andrx Pharmaceuticals*,³⁶ another Judge Lourie opinion, held that proposed patent licensing terms in letters sent from a drug manufacturer to several laboratories regarding an undeveloped invention were not statutory "offers for sale."³⁷ Lacking any definite terms of sale such as quantity, time of delivery, or price, the offer related only to a partnership for clinical testing and marketing the invention at some indefinite point in the future.³⁸ Thus, the letters were considered mere inquiries regarding the project, incapable of triggering the § 102(b) limitation.³⁹ The court also noted that "if Elan had simply disguised a sales price as a licensing fee it would not avoid triggering the on-sale bar,"⁴⁰ indicating that only definite sales terms, not a license of patent rights, can trigger the on-sale bar.

³¹ *Minton v. Nat'l Ass'n of Sec. Dealers, Inc.*, 336 F.3d 1373 (Fed. Cir. 2003).

³² *Id.* at 1378.

³³ *Id.*

³⁴ *Id.*

³⁵ *See Scaltech, Inc. v. Retec/Tetra, LLC*, 269 F.3d 1321, 1329 (Fed. Cir. 2001) (holding that the submission of a proposal by the patent owner to multiple companies regarding the performance of a method for treating oil refinery waste prior to the critical date constitutes a sale because the proposals provided "sufficiently definite offer language to constitute a commercial offer for sale within the meaning of the statute").

³⁶ *Elan Corp., PLC v. ANDRX Pharms., Inc.*, 366 F.3d 1336 (Fed. Cir. 2004).

³⁷ *Id.* at 1341.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

B. BASF V. SNF

In the late 1960s, Sanyo Chemical Industries, Ltd. (“Sanyo”), a Japanese company, developed a process for making hydrous polymer gel intermediates, a step in the manufacture of “super-absorbent” polymer products used primarily in baby diapers.⁴¹ Starting in the mid-1980s, Sanyo licensed a number of companies to produce embodiments of its process.⁴² One such licensee was Celanese Corp., a predecessor to SNF.⁴³ The Sanyo-Celanese licensing agreement gave Celanese the right to manufacture and market super-absorbent polymers but also shared the technical expertise and workforce required to perform the process.⁴⁴ Specifically, Sanyo provided continued technical support and in-person assistance with opening Celanese’s manufacturing plant in Portsmouth, Virginia and a team of Sanyo employees to assist with building and commercial operations.⁴⁵

Only in 1995, a decade after the licensing, disclosure, and transfer of Sanyo’s process technology to Celanese, BASF claimed to have independently discovered a variant of Sanyo’s process and applied for a patent.⁴⁶ That patent was granted in 1997,⁴⁷ and in 1998, BASF acquired two former Celanese plants in the United States, producing more than 150 million pounds of SANWET® products annually.⁴⁸ In 2014, shortly before the BASF patent’s expiration, BASF sued SNF group for alleged infringement, seeking several million dollars.⁴⁹

In *BASF v. SNF Holding Co.*, the district court granted summary judgment in favor of SNF, holding that the Sanyo process was prior art to the BASF patent. This determination was based on multiple grounds, including Sanyo’s process had been put “on-sale” more than one year before the patent’s effective filing date.⁵⁰ Further, the district court rejected BASF’s theory, based on *In re Kollar*, that Sanyo’s process did not put “on-sale” any inventions that the process

⁴¹ Memorandum from James W. Dabney & John F. Duffy to Interested Amici 1-2 (June 25, 2020) (on file with author).

⁴² *Id.* at 2.

⁴³ *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 962 (Fed. Cir. 2020).

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ See U.S. Patent No. 5,633,329 (filed Jan. 25, 1996) [hereinafter the “’329 patent”] (stating that it the patent is directed to improve the process for preparing high-molecular weight polymers, specifically those synthesized by polymerization of water-soluble, monethylenically unsaturated monomers which are used in various fields such as waste management, paper products, and mining); see also *id.* at 960 (describing the ’329 patent).

⁴⁸ Memorandum from James W. Dabney & John F. Duffy, *supra* note 41, at 2.

⁴⁹ *Id.*

⁵⁰ *BASF Corp. v. SNF Holding Co.*, No. 4:17-CV-251, *27-28 (S.D. Ga. Oct. 4, 2018).

embodied.⁵¹ Instead, the court provided that the proper test was derived from *Minton v. National Ass'n of Securities Dealers, Inc.*,⁵² holding that the licensing agreement in conjunction with Sanyo's technical information and in-person operations assistance was a "sale" under 35 U.S.C. § 102(b) because "the transmission of the process description to a user with the ability to perform the process constitutes putting the process 'on-sale'"⁵³

The Federal Circuit, however, reversed on appeal. The court held that, although Sanyo's commercial marketing and licensing of its process to Celanese disclosed and enabled Celanese to replicate and perform the process, the company failed to put any inventions "on-sale" that embodied the process.⁵⁴ The court based its decision on "the well-established principle that the grant of a license to practice a patented invention, with or without accompanying technical information, does not create an on-sale bar."⁵⁵ Consequently, the Federal Circuit directed entry of summary judgment for BASF on the "on-sale" issue.⁵⁶

III. Analysis

The licensing exemption is inconsistent with the on-sale bar, creates uncertainty, and allows for premature commercial exploitation. While finding support in the *Group One*⁵⁷, *Kollar*⁵⁸, and *Elan Corp*⁵⁹ opinions, the idea of a licensing exception to the on-sale bar flatly contradicts the Supreme Court's ruling in *Pfaff v. Wells Electronics, Inc.*, that an invention is not merely an

⁵¹ *Id.* at *30-31.

⁵² *Minton v. Nat'l Ass'n of Sec. Dealers*, 336 F.3d 1373, 1378 (Fed. Cir. 2003) (explaining that a commercial transaction arranged as a license or lease of a product or device may be "tantamount to a sale" under the § 102(b) bar where "the product is just as immediately transferred to the 'buyer' as if it were sold" (quoting *In re Kollar*, 286 F.3d 1326, 1331 n.3 (Fed. Cir. 2002))).

⁵³ *BASF Corp.*, No. 4:17-CV-251, at *27-28 (citing *Minton*, 336 F.3d at 1378).

⁵⁴ *BASF v. SNF Holding Co.*, 955 F.3d 958, 969 (Fed. Cir. 2020).

⁵⁵ *Id.* at 970 (citing *In re Kollar*, 286 F.3d at 1333).

⁵⁶ *Id.* at 971.

⁵⁷ *Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1049 (Fed. Cir. 2001) ("[A] sale of rights in a patent, as distinct from a sale of the invention itself, is not within the scope of the statute, and thus does not implicate the on-sale bar.").

⁵⁸ *In re Kollar*, 286 F.3d at 1333 ("We hold [] that licensing the invention, under which development of the claimed process would have to occur before the process is successfully commercialized, is not [] a sale.").

⁵⁹ *Elan Corp., PLC v. ANDRX Pharms., Inc.*, 366 F.3d 1336, 1341 (Fed. Cir. 2004) ("An offer to enter into a license under a patent for future sale of the invention . . . is not an offer to sell the patented invention that constitutes an on-sale bar." (citing *In re Kollar*, 286 F.3d at 1331)).

embodiment of an idea, but the idea itself.⁶⁰ As argued by patent law authorities both on and off the Federal Circuit, *Pfaff*'s conception of an invention's statutory "sale" naturally includes a licensing agreement conveying to the buyer the ability to practice the invention.⁶¹ Considering a licensing agreement as a sale was first supported in the USPTO's argument against the formulation of the licensing exception adopted in *In re Kollar*.⁶² As observed from documents surrounding the case, the USPTO in *Kollar* held that a process invention was put on-sale by a license agreement, reasoning:

With respect to "sale" . . . , an embodiment of a chemical process can be physically represented by a written description in a document which not only identifies the chemical process but also enables the practice of that chemical process by one of ordinary skill in the art. An embodiment of a chemical process can further be the subject of a commercial offer for sale wherein the document describing the process can be used to inform the buyer of the process being commercially offered for sale by the seller, and upon executing the sales contract, is transferred by seller to the possession and control of the buyer to enable the buyer to practice the purchased chemical process.⁶³

In further support of the agency's position, the Director of the USPTO told the court on appeal:

A chemical process can be bought or sold by a commercial contract that would give and pass rights of property to the extent that the buyer would be supplied with information defining an embodiment or embodiments of a process and can use that information to use or practice the embodiment(s) of that process in return for consideration that the buyer pays or

⁶⁰ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 59 (1998).

⁶¹ Memorandum from James W. Dabney & John F. Duffy, *supra* note 41, at 1 ("Offering to sell a license[] is a typical way in which intangibles, including inventions, are commercially marketed and put 'on[-] sale.>"; *see also id.* at 60 (explaining that the statutory term "invention" refers to an intangible conception, not its "physical embodiment").

⁶² *In re Kollar*, 286 F.3d at 1333.

⁶³ Memorandum from James W. Dabney & John F. Duffy, *supra* note 41, at 4.

promises to pay the seller.⁶⁴

While the USPTO's argument went unheeded by the Federal Circuit in *Kollar*,⁶⁵ the idea that the sale of a license to practice a chemical process along with the knowledge necessary to implement the process as a sufficient trigger for the on-sale bar was repeated in later cases.⁶⁶

In *Minton*, Judge Gajarsa's concurrence opined that to activate the §102(b) on-sale bar, an invention's "commercial offer for sale" must be more than one year prior to filing an application.⁶⁷ Whether said invention was a tangible product or intangible process was irrelevant.⁶⁸ Gajarsa based his concurrence on two points: first, §102(b) speaks only of an "invention" being on-sale and draws no distinction between processes and tangible devices;⁶⁹ Second, if the *Kollar* process really needed more development before it could be successfully commercialized, then it was not "ready for patenting" under *Pfaff*, and no on-sale bar could apply for that reason alone.⁷⁰ Thus, assuming the invention is "ready for patenting," it is the "sale" of the invention by the patentee that triggers the on-sale bar rather than the performance of the process by the transferee or commercialization of the process' product.⁷¹

In *Minton*, the invalidating "sale" occurred when Minton conveyed TEXCEN by leasing it to the broker.⁷² Transference of the steps in the later-claimed method marked the "first commercial marketing" of the invention, implicating the on-sale bar and the court's policy concern that a patentee not

⁶⁴ *Id.*

⁶⁵ See *In re Kollar*, 286 F.3d at 1330 ("We conclude that the Board erred in determining that the Celanese Agreement constituted a 'sale' of the claimed invention within the meaning of § 102(b).").

⁶⁶ See *Minton v. Nat'l Ass'n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1378 (Fed. Cir. 2003) (noting that an offer to license may be "tantamount to a sale" triggering § 102(b) where "the product is . . . just as immediately transferred to the 'buyer' as if it were sold" (quoting *Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1049 n.2 (Fed. Cir. 2001))); *Group One*, 254 F.3d at 1053 (Lourie, J., concurring); *Minton*, 336 F.3d at 1382 (Gajarsa, J., concurring) ("[N]othing in § 102(b) compels differential treatment between a sale of an invention that is a tangible item and an invention that is a series of steps in a process."); *Helsinn Healthcare S.A. v. Teva Pharms. USA, Inc.*, 855 F.3d 1356, 1364 (Fed. Cir. 2017) (holding that a supply and purchase agreement qualified as a § 102(b) sale because its terms constituted "a sale of the invention under the law of contracts as generally understood").

⁶⁷ *Minton*, 336 F.3d at 1382 (Gajarsa, J., concurring).

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.* at 1378.

“preserve the monopoly . . . for a longer period than is allowed by the policy of the law. . . .”⁷³ The view of a licensing agreement as a sale was given further support in *Helsinn Healthcare v. Teva Pharmaceuticals*.⁷⁴ In *Helsinn*, a supply and purchase agreement, obligating a purchaser to buy a patentee’s claimed invention of intravenous solution once it received FDA approval constituted a “sale” of the claimed invention prior to the critical date as required for the pre-AIA on-sale bar to patentability to apply.⁷⁵ The agreement included terms for price, method of payment, and method of delivery.⁷⁶ Additionally, the patentee was obligated to meet the purchaser’s firm orders, and no ambiguity was introduced into the agreement by its provision for the purchase of either or both doses of the solution.⁷⁷

Contrary to the *Kollar* approach, which required an embodiment of the invention to be for sale to trigger the on-sale bar,⁷⁸ the court in *Helsinn* held that “an agreement contracting for the sale of the claimed invention contingent on regulatory approval is still a commercial sale as the commercial community would understand that term.”⁷⁹ The court further noted “[t]he UCC expressly provides that a ‘purported present sale of future goods . . . operates as a contract to sell’” regardless of “whether those future goods [had] yet to receive regulatory approval.”⁸⁰ As the court reasoned, the presence of a condition precedent, such as regulatory approval, does not make a contract invalid or unenforceable as they “are a basic feature of contract law.”⁸¹ Thus, a condition precedent to the embodiment of an invention before the critical date does not prevent a sale or offer for sale from triggering the on-sale bar.⁸²

⁷³ *Id.* (quoting *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 64 (1998)).

⁷⁴ *Helsinn Healthcare S.A. v. Teva Pharms. USA, Inc.*, 855 F.3d 1356 (Fed. Cir. 2017).

⁷⁵ *Id.*

⁷⁶ *Id.* at 1365.

⁷⁷ *Id.* at 1364, 1366.

⁷⁸ *In re Kollar*, 286 F.3d 1326, 1334 (Fed. Cir. 2002).

⁷⁹ *Helsinn Healthcare*, 855 F.3d at 1365.

⁸⁰ *Id.* (“[F]uture goods . . . [are] [g]oods which are not both existing and identified.” (quoting U.C.C. § 2-105(2) (AM. L. INST. & UNIF. L. COMM’N 1977))).

⁸¹ *Id.*

⁸² *Id.*; see, e.g., 25 RICHARD A. LORD, WILLISTON ON CONTRACTS § 67:80 (4th ed. 2013) (“Particular construction or development projects may also require specific governmental or regulatory approvals as conditions precedent to the consummation of the project.”); 8 ARTHUR CORBIN & JOSEPH M. PERILLO, CORBIN ON CONTRACTS § 31.11 (2022) (“In many contracts it is expressly provided that some act of a third person shall be a condition of a promisor’s duty . . . [such as a duty] to buy property contingent on a zoning board’s approval . . .”).

A. PATENT LICENSING IN THE CHEMICAL INDUSTRY: SPECIALIZED
ENGINEERING FIRMS AND COMPETING TECHNOLOGIES

To illustrate the particular policy challenges a licensing exemption poses, this section goes into detail about the exception's effects on commercial activity in a market where, with ever-increasing frequency, inventions are marketed and sold in transactions with no companion sale of physical goods. This section also discusses the relationship between the concept of "an offer to sell" in the overlapping areas of patent and contract law.

With the aggregate value of intangible assets, such as patent rights, surpassing the sale of tangible goods, the licensing exception to "on-sale" prior art status affects a very large and rapidly expanding domain of commercial activity,⁸³ commonly referred to as the knowledge economy.⁸⁴ Under current trends, the economies of developed countries, like the United States, have been increasingly geared toward innovation, as intangible assets account for nearly 90% of economic growth in the United States.⁸⁵ In comparison, the value of tangible assets in Canada has largely stagnated.⁸⁶ In total, intangible assets (including IP rights) account for 84% of the average S&P 500 company's value⁸⁷ and possess an estimated cumulative value of \$20-25 trillion.⁸⁸ Given these circumstances, a general licensing exemption to the on-sale bar requiring a physical embodiment of the invention as proposed by the Federal Circuit in

⁸³ Thompson, *supra* note 19, at 39 n.16 ("In terms of the monetary value of transactions, the licensing of intangible rights (including especially patent rights) now far outweigh the value of tangible sales."); see Bruce Berman, *\$21 Trillion In U.S. Intangible Assets Is 84% of S&P 500 Value – IP Rights and Reputation Included*, IP CLOSEUP (June 4, 2019), <https://ipcloseup.com/2019/06/04/21-trillion-in-u-s-intangible-asset-value-is-84-of-sp-500-value-ip-rights-and-reputation-included/> ("Many senior executives and investors are surprised that the value of intangible assets are five times greater than tangibles for most major businesses.").

⁸⁴ Kay Withers, *Intellectual Property and the Knowledge Economy*, INST. FOR PUB. POL'Y RSCH. 3 (Feb. 2006), https://www.ippr.org/files/images/media/files/publication/2011/05/intellectual_property_1402.pdf.

⁸⁵ Robert J. Shapiro & Kevin A. Hassett, *The Economic Value of Intellectual Property*, SONECON 14 n.48, <http://www.sonecon.com/docs/studies/IntellectualPropertyReport-October2005.pdf> (last visited Nov. 12, 2022).

⁸⁶ John R. Baldwin, Wulong Gu & Ryan MacDonald, *The New Investment Paradigm?*, ECON. INSIGHTS 2 (June 2012), <https://www150.statcan.gc.ca/n1/en/pub/11-626-x/11-626-x2012007-eng.pdf?st=jkKQJVL>.

⁸⁷ Berman, *supra* note 83.

⁸⁸ *Id.* (citing *2019 Intangible Assets Financial Statement Impact Comparison Report*, PONEMON INST. (Apr. 2019), <https://www.aon.com/getmedia/60fbb49a-c7a5-4027-ba98-0553b29dc89f/Ponemon-Report-V24.aspx>).

BASF presents several issues to the integrity of the patent system and creates uncertainty for potential patent applicants.

As previously mentioned, the Supreme Court in *Pfaff* found the acceptance of a purchase order, along with the inventor providing detailed drawings of the yet-to-be-produced device, was sufficient to trigger 102(b)'s on-sale bar.⁸⁹ Straying away from this bright-line rule, the Federal Circuit's requirement of an embodiment of that invention produces questionable results. For instance, an inventor of a method patent can trigger the § 102(b) bar through an offer to perform the method for compensation but would not by teaching others to perform the same process in exchange for up-front payment.⁹⁰ Similarly, a mere re-labeling of a purchase order acceptance as an "agreement to license" would effectively avoid a penalty under § 102(b).⁹¹

Moreover, the Federal Circuit's continued use of a licensing exemption creates uncertainty within the patent system, which the Supreme Court attempted to ameliorate in *Pfaff* by abandoning the rule of starting the on-sale bar period when an invention is "substantially complete."⁹² As noted in *Kollar*, the standard for the Federal Circuit's licensing exemption moves the focus of the inquiry from "the first commercial marketing" of the invention to an unidentified future period when an embodiment is first sold, creating difficulties for when the claimed patent is for an intangible process or method.⁹³

In particular, the Federal Circuit has noted that courts and inventors under the *Kollar* rule "cannot articulate in advance what would constitute a sale of a process in terms of the on-sale bar."⁹⁴ Despite this ambiguity, the *Kollar* court recognized three circumstances that potentially qualify as the commercialization of an invention: (1) "the sale of a tangible patented item," (2) performance of the process for consideration, and (3) "a sale by the patentee or a licensee of the patent of a *product* made by the claimed process."⁹⁵ The court did not recognize the sale of the right and ability to use a process invention through a licensing agreement.⁹⁶ Although there is no functional difference between a device patent

⁸⁹ See *supra* p. 6 (citing *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 68 (1998)).

⁹⁰ *In re Kollar*, 286 F.3d 1326, 1333 (Fed. Cir. 2002).

⁹¹ Thompson, *supra* note 19, at 40 n.17 (noting that, "[u]nder *Pfaff*, [the] provis[ion] [of] detailed drawings and know how . . . coupled with the accepted purchase order render[s] [a] yet-to-be-produced product 'on[-] sale'").

⁹² *Pfaff*, 525 U.S. at 65-66.

⁹³ Thompson, *supra* note 19, at 59-60.

⁹⁴ *In re Kollar*, 286 F.3d at 1333.

⁹⁵ *Id.* (emphasis added).

⁹⁶ See Thompson, *supra* note 19, at 39 ("[F]or some inventions[,] . . . licensing may be the only effective way to exploit them commercially A general 'licensing exception' to the §

that is fully described but not yet reduced to practice, and a process patent, whose rights have been licensed but not used, the *Kollar* rule creates different classes of invention regarding how the on-sale bar applies. *Pfaff* demonstrated that the former may be the subject of a “commercial offer for sale.”⁹⁷ Concurrently, as demonstrated in *Scaltech, Inc. v. Retec/Tetra, LLC.*, an offer by the inventor to perform their process may be a commercial offer for sale even if the process is not actually performed.⁹⁸ If adhering to the *Kollar* rule, the sale of patent rights through a licensing agreement, even if the seller provides the human resources to both teach and help implement the process to which those rights grant access, is not a “sale.”⁹⁹

Judge Gajarsa’s concurrence in *Minton* recognizes that a commercial offer for sale refers to an intangible process as it does a tangible product, as “commerce” is merely the exchange of goods and services, often through contract.¹⁰⁰ Much like the supply and purchase agreement in *Helsinn*, “a license is a type of contract which ordinarily requires” offer and acceptance.¹⁰¹ A license may be the only effective way of commercializing a process with no tangible final product.¹⁰² For instance, process technology licensing has a long history in the chemical industry: first as a means for dominant producers to maintain market share and deter entry by potential competitors and then as a means to profit from innovation.¹⁰³ Today, licensing generates revenue from process innovation in bulk organic chemical and petrochemical industries. This has led to the “emergence of a class of specialized process design and engineering firms” that play “an important role in the development and diffusion of process innovations.”¹⁰⁴ Specifically, “technology licensing is most common in [chemical

102(b) on-sale bar can therefore allow some inventors to gain commercial rewards for their inventions for extended periods before filing for patent protection.”).

⁹⁷ *Pfaff*, 525 U.S. at 67.

⁹⁸ *Scaltech, Inc. v. Retec/Tetra, LLC.*, 269 F.3d 1321, 1328-29 (Fed. Cir. 2001).

⁹⁹ *In re Kollar*, 286 F.3d at 1332.

¹⁰⁰ *Minton v. Nat'l Ass'n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1382 (Fed. Cir. 2003).

¹⁰¹ Thompson, *supra* note 19, at 65 (“A license is a type of contract and as such ordinarily requires a bargained-for exchange. To grant a license is thus to commercialize what is licensed.”).

¹⁰² *Id.*

¹⁰³ See Ashish Arora & Andrea Fosfuri, *The Market for Technology in the Chemical Industry: Causes and Consequences*, 92 REVUE D'ÉCONOMIE INDUSTRIELLE 317, 321 (2000), https://www.persee.fr/doc/rei_0154-3229_2000_num_92_1_1054 (noting that during the 1980s only a fifth of the technology used in new chemical investments worldwide was developed in-house by investors, while the rest was licensed from unaffiliated sources).

¹⁰⁴ See generally Ashish Arora, *Patents, Licensing and Market Structure in the Chemical Industry*, 26 RSCH. POL'Y 391, 391 (1997),

<https://www.sciencedirect.com/science/article/pii/S0048733397000140> (explaining that technology licensing has helped to lower barriers to entry and increase competition in the

sub-]sectors with large scale production facilities, with relatively homogenous products, and with a large number of new plants.”¹⁰⁵

1. *Specialized Engineering Firms (“SEFs”)*

The existence of specialized process design, engineering, and construction firms (“SEFs”) further emphasizes the importance of viewing licensing transactions for process technologies as a commercial sale. Without the necessary downstream assets to independently commercialize their innovations, “SEFs use[] licensing as the principle [means] of profiting from their [inventions].”¹⁰⁶ Between 1990-1999, SEFs supplied technology for more than one-third of plant investments worldwide, with 45% of all technologies from unaffiliated firms being from SEFs.¹⁰⁷ SEFs’ primary function was the improvement and modification of processes developed by chemical firms.¹⁰⁸ SEFs then offered those same processes for a license.¹⁰⁹ Specifically, a chemical firm would license its technology to a SEF in exchange for “the core technology licensed from [the] chemical producer, along with know-how and installation and engineering services.”¹¹⁰

In essence, hiring a SEF entails a transfer of the right to practice a process and the facilities and capability to perform it in exchange for compensation. This transaction would thus trigger the on-sale bar both under the view promoted by the Supreme Court in *Pfaff* and by Judge Gajarsa in *Minton*.¹¹¹

chemical industry).

¹⁰⁵ See Arora & Fosfuri, *supra* note 103, at 322-23 (“Indeed, in Pulp & Paper, Gas Handling, Fertilizers, Industrial Gases and Organic Refining more than 90 % of the plants involve[] the sale of technology between firms that are not linked through ownership ties . . .”).

¹⁰⁶ *Id.* at 324 (citation omitted) (“By the 1960s, SEFs dominated the design and construction of new plants and were important sources of process innovation . . . Freeman [] showed that for the period 1960-66, SEFs as a group accounted for about 30 % of all licenses.”).

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 324-25.

¹⁰⁹ *Id.* at 325.

¹¹⁰ *Id.*

¹¹¹ *Id.* at 325 (“In the 1980s, SEFs were more important sources of technology for small chemical companies and third world firms. For instance, large chemical companies from advanced countries (those with a turnover of more than \$1 billion in 1988) purchased around a fifth of their technologies from SEFs. For smaller first world companies (with less than \$1 billion of turnover in 1988) this percentage was 37 %, and close to 50 % for third world chemical firms.”); *Pffaf v. Wells Elecs., Inc.*, 525 U.S. 55 (1998); *Minton v. Nat’l Ass’n of Sec. Dealers, Inc.*, 336 F.3d 1373 (Fed. Cir. 2003).

2. *Competing Technologies*

As previously mentioned, licensing has become an important method for profiting from innovation.¹¹² In the chemical industry, at least half of licenses sold to unaffiliated firms are sold by other chemical producers, and companies are more likely to use licensing in dealing with overseas firms.¹¹³ Now, “many firms explicitly consider licensing revenues as part of their overall return from investing in technology.”¹¹⁴ For example, Du Pont created a division within its organization in 1994 tasked with overseeing all technology transfer activities.¹¹⁵ By 1999, the company expected to yield \$100 million from its aggressive out-licensing program.¹¹⁶ In short, chemical licensing has become a major market, with forecasts that the market will reach \$15.85 Billion by 2025.¹¹⁷

In conjunction with technology licensing by SEFs, an increased competition promoted by widespread licensing in the chemical industry challenges the traditional view that licensing is undesirable. Indeed, licenses change the payoff to the strategy of “trying to keep one’s technology in-house.”¹¹⁸ The existence of multiple viable means of producing a particular product incentivizes firms to sell their technology through licensing agreements rather than keep knowledge regarding a particular firm’s process a secret.¹¹⁹ This is true whether a firm’s competitor is another chemical producer or a SEF.¹²⁰ SEFs have had a particularly strong effect on the prevalence of licensing in the chemical industry, although, lacking production facilities of their own, these firms have little option but to license their technology to others.¹²¹ Thus, when SEFs are widespread,

¹¹² Arora & Fosfuri, *supra* note 103, at 326.

¹¹³ *Id.*

¹¹⁴ *Id.* at 327.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Chemical Licensing Market Size Forecast to Reach \$15.85 Billion by 2025*, OPENPR (June 11, 2021, 4:30 PM), <https://www.openpr.com/news/2303645/chemical-licensing-market-size-forecast-to-reach-15-85-billion>.

¹¹⁸ Arora & Fosfuri, *supra* note 103, at 327-28.

¹¹⁹ *Id.* at 328 (referencing trade publications which show that, “at least in some markets, chemical and oil companies are aggressively competing to sell technology often in collaboration with an SEF which undertakes the provision of the engineering and other know-how”).

¹²⁰ *Id.*

¹²¹ *Id.* at 324-325.

major chemical producers, like Sanyo, are incentivized to view aggressive licensing as a dominant business strategy.¹²²

Moreover, even without SEFs, a technology holder may license its innovation if the net licensing revenues exceed the loss in profits due to increased market competition.¹²³ Licensing, however, “imposes a negative pecuniary externality upon other incumbent producers” using a process.¹²⁴ Consequently, technology licensing is most common in sectors similar to conditions in which the Sanyo process was implemented—a large-scale production facility with relatively homogenous products and many new plants.¹²⁵ Additionally, most licensing in the chemical industry relates to processes.¹²⁶ New products, due to the concentration of profit loss upon the licensor and the unimportance of SEFs in product innovation, are far less likely to be licensed at the initial stage of their life cycles.¹²⁷ While licensing and the presence of a technology market are not limited to the chemical industry, a discussion of licensing in other industries is beyond the scope of this Note.

3. *BASF vs. SNF: The Market for Super-Absorbent Polymers*

Illustrating the future need for a broader consideration of what should be considered an “on-sale” process for patentability purposes, the Federal Circuit’s decision involves two processes to produce super-absorbent polymers (SAPs). SAPs are a technology whose chemical composition enables various applications in fields such as personal care products, health care, agriculture, and horticulture.¹²⁸ Notably, the global market for SAPs “was valued at \$7.6 billion in 2019, and is projected to reach \$10.8 billion by 2027”¹²⁹ Both BASF and Sanyo are key players in that industry.¹³⁰ The growth of the SAP market is heavily influenced by population growth in countries, including China and India, where

¹²² *Id.* at 329 fig.4 (demonstrating that, during the 1980s, an average of 2.8 licenses were sold out by chemical producers in all chemical sub-sectors in which SEFs had more than 42% of market share versus as little as 1.3 in sub-sectors where SEFs had less than 18% of the market).

¹²³ *Id.* at 328.

¹²⁴ *Id.*

¹²⁵ *Id.* at 329 fig.5 (showing that the average number of licenses per patent-holder increases as the product market becomes more homogenous).

¹²⁶ *Id.* at 330.

¹²⁷ *Id.*

¹²⁸ Maryam Vanaee, *Superabsorbent Polymer – A Review*, CADEMIX INST. OF TECH. (Jan. 28, 2022), <https://www.cademix.org/superabsorbent-polymer-a-review/>.

¹²⁹ Amit Narune & Eswara Prasad, *Super Absorbent Polymer Market Outlook - 2027*, ALLIED MKT. RSCH., <https://www.alliedmarketresearch.com/super-absorbent-polymers-market> (last visited Nov. 4, 2021).

¹³⁰ *Id.*

demand for baby diapers is on the rise, in conjunction with increasing infant hygiene awareness.¹³¹ Moreover, the issue of aging populations in countries such as Japan, Italy, Finland, and Greece has increased the demand for SAPs for producing adult diapers.¹³² Given the demand for SAPs, a pre-existent technology,¹³³ as well as the existence of the process at issue, granting BASF a monopoly on the process would function contrary to the stated goals of the American patent system.

B. *BASF, PFAFF*, AND §102(B)

The landscape of process licensing in the chemical industry and the importance of SAPs as a pre-existent technology with high levels of demand and public use provide the necessary context for the Federal Circuit's 2020 decision. In ruling for BASF, the court held that “the grant of a license to . . . a patented invention, with or without accompanying technical information, does not itself create an on-sale bar.”¹³⁴ As highlighted previously, this decision directly contradicts the Patent Act's statutory text and controlling Supreme Court precedent because it requires a *product*, rather than an invention, to be put on-sale.¹³⁵

Under 35 U.S.C. § 102, a claimed “invention” is unpatentable if it was “on-sale” before a specified time.¹³⁶ As later clarified by the Supreme Court, the term “invention” in the Patent Act “unquestionably refers to the inventor's conception rather than to a physical embodiment of that idea.”¹³⁷ Specifically, the court in *Pfaff* held that an “invention” under 35 U.S.C. §102 included conceptions confined to “drawings or other descriptions of the invention that [are] sufficiently specific to enable a person skilled in the art to practice the

¹³¹ *Id.*

¹³² *Id.*

¹³³ See *Super Absorbent Polymers Market*, PERSISTENCE MKT. RSCH., <https://www.persistence-marketresearch.com/market-research/super-absorbent-polymers-market.asp> (last visited Nov. 7, 2021) (noting that “[s]uper absorbent polymers were developed in [] 1960 by the U.S. Department of Agriculture through its work on materials [super absorbent to soil].” Additionally, SAPS were first used commercially for disposable diapers and sanitary wipes in 1970, a near quarter-century before BASF filed its patent application).

¹³⁴ *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 970 (Fed. Cir. 2020).

¹³⁵ See *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67-68 (1998) (holding that an invention may be put “on[-] sale” if it is made the subject of a commercial offer for sale and the inventor provides “drawings or other descriptions . . . specific [enough] to enable a person skilled in the art to practice the invention”).

¹³⁶ 35 U.S.C. § 102.

¹³⁷ *Pfaff*, 525 U.S. at 60.

invention.”¹³⁸ Moreover, the Court ruled against starting the on-sale bar period when an invention was “substantially complete” because doing so “seriously undermines the interest in certainty.”¹³⁹

Properly understood, the framework provided by the Patent Act and Supreme Court precedent should have led the Federal Circuit to conclude that a “commercial offer for sale” will trigger a completed invention’s “on-sale” status even where there is no physical embodiment at the time of the offer. As previously highlighted, this view of the “on-sale” bar was directly advocated for by the USPTO in *Kollar*¹⁴⁰ and by Judge Gajarsa’s concurrence in *Minton*.¹⁴¹ Following the reasoning established in *Pfaff* and expanded on by Judge Gajarsa, Minton himself could have sold his computer system solely as an intangible download from his website, and the transaction would have still qualified as a “commercialization” of his invention at the time of his sale.¹⁴² This is not dramatically different from Minton leasing a tangible computer with the software program pre-uploaded.¹⁴³ Both acts transfer to the broker the capability of practicing the process invention and lack any actual performance of the invention by carrying out the process’s steps.¹⁴⁴

Moreover, the Federal Circuit recently took this stance in *Helsinn*.¹⁴⁵ In that case, the court held that a commercial offer for sale existed despite the absence of the invention’s physical embodiment.¹⁴⁶ The existence of a sale was evidenced by the inclusion of terms for price, method of payment, and method of delivery, as well as the patentee’s obligations in the parties’ supply and purchase agreement.¹⁴⁷

These authorities cite the phrase “on-sale,” based on the precedent set in *Pfaff*, as denoting “when an invention that is ready for patenting is *first marketed commercially*.”¹⁴⁸ That construction is faithful to the text and structure of 35 U.S.C.

¹³⁸ *Id.* at 67–68.

¹³⁹ *Id.* at 65–66.

¹⁴⁰ Memorandum from James W. Dabney & John F. Duffy, *supra* note 41, at 3–4.

¹⁴¹ *Minton v. Nat’l Ass’n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1382 (Fed. Cir. 2003) (Gajarsa, J., concurring).

¹⁴² Thompson, *supra* note 19, at 62.

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Helsinn Healthcare S.A. v. TEVA Pharms. USA Inc.*, 855 F.3d 1356 (Fed. Cir. 2017).

¹⁴⁶ *Id.* at 1360.

¹⁴⁷ *Id.* at 1364–65.

¹⁴⁸ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67 (1998) (emphasis added); *see also id.* at 1370 (“A primary rationale of the on-sale bar to patentability is that publicly offering a product for sale that embodies the claimed invention places it in the public domain, regardless of when or whether actual delivery occurs; a patented product need not be on-hand or even delivered prior to the critical date to trigger the on-sale bar.”).

§ 102 and enforces the fundamental limitation of patents to innovations that are “new.”¹⁴⁹ The *BASF* decision, in contrast, applied a categorical rule excluding license transactions, which is inconsistent with the “first marketed commercially” standard.¹⁵⁰ Roderick Thompson forecasted the negative implications of the holding in *BASF*, reasoning that whether the Federal Circuit would determine at which stage of inventive progress an invention would qualify for the on-sale bar is “too difficult to predict in advance.”¹⁵¹ Moreover, a ruling whether “one type of invention was [] sufficiently developed” to qualify as “substantially complete” provided little guidance as to whether another invention would receive a similar ruling.¹⁵² *Pfaff*, and the cases which followed a similar model of reasoning, satisfied the need within the patent system for “a bright-line triggering event [that] runs through every stage of an invention’s development, from initial research through final merchandizing.”¹⁵³ “Uncertainty[,]” Thompson recognized, “can turn intermediate stages, such as beta site product development, into minefields to be traversed at some peril—the very opposite of the predictable landscape envisioned by *Pfaff*.”¹⁵⁴

Contrary to the bright-line rule proposed by *Pfaff*, the standard followed by *Kollar*, and now by *BASF*, *promotes unpredictability*. “It [] move[s] the focus of inquiry from ‘the first commercial marketing’ of the invention by the inventor to . . . [an] unidentified on-sale triggering event when a tangible product is first sold in the future.”¹⁵⁵ This standard is especially difficult to implement when the invention involved is a process, not an apparatus or tangible item to be sold.¹⁵⁶ In *Kollar*, the Federal Circuit sought to assert the distinction that *only* a tangible item is on-sale when “the transaction rises to the level of a commercial offer for sale under the Uniform Commercial Code.”¹⁵⁷ In contrast, the court found that a process, as it consists of a series of steps and is not tangible, must be “carried out or performed.”¹⁵⁸ This standard presents a glaring flaw—the standard does

¹⁴⁹ 35 U.S.C. § 101.

¹⁵⁰ *Compare Helsinn*, 855 F.3d at 1367 (“It is clear that the Supply and Purchase Agreement constituted a commercial sale or offer for sale for purposes of § 102(b)”) *with* *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 969-70 (Fed. Cir. 2020) (“Thus, the holding of *Kollar* on the well-established principle that the grant of a license to practice a patented invention, with or without accompanying technical information, does not itself create an on-sale bar.”).

¹⁵¹ Thompson, *supra* note 19, at 59.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 59-60.

¹⁵⁷ *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002).

¹⁵⁸ *Id.* (finding that the transmission of a written description does not meet the standard for

not allow patent-seekers to articulate in advance what constitutes a sale under the on-sale bar.

Contrary to the court's opinion in *BASF*, an invention can be “marketed commercially” by performing the process for consideration and offering to sell a license to replicate and use that process. This is especially true when the seller also provides the means to put that process into use. For example, chemical licensing is a multi-billion-dollar enterprise with entire companies based on licensed processes' implementation.¹⁵⁹ Presented with this reality, it is impossible to say that chemical processes are put into the public domain solely through the sale of the process's physical embodiment or an offer to perform the process in exchange for compensation.

Like *Kollar* before it, the *BASF* decision applies a series of arbitrary, *ad hoc* rules that conflict with the text of 35 U.S.C. § 102 and that do not function as valid proxies for the statutory inquiry the *Pfaff* decision prescribes. The requirement of a different triggering event for different classes of inventions finds no support within the Patent Act itself.¹⁶⁰ *Minton* highlights the additional problem that “[m]aking the ‘sale’ depend on the later actions of the transferee . . . deflects the focus away from the actions of the inventor and [their] own commercial exploitation of [their] invention.”¹⁶¹ As a result, an inventor who licenses a process invention cannot be certain when to apply for a patent.¹⁶²

Straying far from the patentability criteria enunciated in § 102 and *Pfaff*, *BASF*'s *ad hoc* rules demonstrate the importance of limiting the licensing exception. First, the Federal Circuit held that the Sanyo process was never put “on-sale” within the meaning of 35 U.S.C. § 102 because “the essential features of the claimed process here were not embodied in a product sold or offered for sale before the critical date.”¹⁶³ Under that rule, a process invention is “on-sale” if the essential features of the invention are embodied in a product that is offered for sale, but a process invention is not “on-sale” if all its features are commercially marketed, disclosed and transferred through licensing. This rule is errant because, as previously noted, the text of § 102 requires only an “invention,” not a product, to be on-sale.¹⁶⁴ *Pfaff* specifically held that an

“first commercial sale”).

¹⁵⁹ Arora & Fosfuri, *supra* note 103, at 325.

¹⁶⁰ See 35 U.S.C. §102(b) (pre-AIA) (“A person shall be entitled to a patent unless . . . the invention was . . . on[-]sale in this country, more than one year prior to the date of the application for patent in the United States . . .”) (emphasis added).

¹⁶¹ Thompson, *supra* note 19, at 62.

¹⁶² *Id.* at 62-63.

¹⁶³ *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 970 (Fed. Cir. 2020).

¹⁶⁴ 35 U.S.C. § 102(a)(1).

“invention” should not be equated with a “physical embodiment” of the invention.¹⁶⁵ As a device patent can be put “on-sale” without first being manufactured or used, it is illogical to require that process inventions first be performed. While the Federal Circuit in *Scaltech* held that an offer by the inventor to perform a process was held to be a commercial offer for sale, the court did not consider it a *requirement* that the process be performed to trigger the “on-sale bar.”¹⁶⁶

Second, *Pfaff* defines a process invention as being “on-sale” when it is ready for patenting and commercially marketed in any fashion, including offers of licenses to practice the invention.¹⁶⁷ In contrast, the *BASF* decision regards only two circumstances as sufficiently “on-sale” for § 102 purposes: (1) producing a physical embodiment as the subject of sale and (2) “performing [a] process itself for consideration”¹⁶⁸ Under that rule, if Sanyo had been paid consideration for its performance of a process without disclosing or licensing it to another, that activity would put the process “on-sale.” Unfortunately, Sanyo had been paid to disclose and transfer a process on terms that guaranteed the process’s successful replication and use by the transferee/licensee.¹⁶⁹ As a result, Sanyo was held not to have put the licensed process “on-sale.”¹⁷⁰ Such an unprincipled distinction finds no basis in the text of 35 U.S.C. § 102 or *Pfaff*.

Third, *Pfaff*’s conception of “on-sale” is articulated by an instance when an invention, “ready for patenting[,] is first marketed commercially.”¹⁷¹ That standard encompasses marketing and selling a license to replicate one or more inventions as part of a technology transfer, as occurred in this case.¹⁷² The *BASF* decision, in contrast, applies a party-specific construction of “on-sale.” It states that “a patentee’s sale of a product made by [their] later-patented process” is sufficient to put the process on-sale.¹⁷³ Under this rule, the meaning of “on-sale” depends on whom the seller happens to be. The court agreed with *BASF*’s position, holding that the rule did not apply to the Sanyo process because neither

¹⁶⁵ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 60 (1998).

¹⁶⁶ *Scaltech, Inc. v. Retec/Tetrac, LLC.*, 269 F.3d 1321, 1327-28 (Fed. Cir. 2001).

¹⁶⁷ Memorandum from James W. Dabney & John F. Duffy, *supra* note 41, at 1.

¹⁶⁸ *BASF*, 955 F.3d at 969.

¹⁶⁹ *See id.* at 970 (“The Sanyo-Celanese agreement provided Celanese with a license to practice the Sanwet® Process, exhaustive technical information about performing it and the in-person assistance of Sanyo employees.”).

¹⁷⁰ *Id.* at 969–70.

¹⁷¹ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67 (1998).

¹⁷² Memorandum from James W. Dabney & John F. Duffy, *supra* note 41, at 1.

¹⁷³ *BASF*, 955 F.3d at 969 (citing *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147-48 (Fed. Cir. 1983)).

Sanyo nor its licensee, Celanese, happened to be the “patentee” bringing suit.¹⁷⁴ Such a construction of “on-sale” has no basis in the text of 35 U.S.C. § 102 or in *Pfaff*. The various rules applied in the *BASF* decision overtly discriminate against prior users of unpatented technology and subvert the overarching statutory limitation of patents to innovations that are “new.”¹⁷⁵

C. THE *KOLLAR/BASF* RULE AND PREMATURE COMMERCIAL EXPLOITATION

As recognized in *Kollar*, “the overriding concern of the on-sale bar [is] (to discourage) an inventor’s attempt to commercialize his invention beyond the statutory term.”¹⁷⁶ While recognizing that the licensing exemption may allow inventors to economically benefit past the critical date, the Federal Circuit held that the “[primary] benefit from commercializing an invention occurs when the invention is actually utilized commercially”¹⁷⁷ The court in *Kollar* recognized that a licensing exemption serves the policy interest of making inventions available to the public by establishing conditions which enable inventors, with limited resources to produce commercial embodiments of their inventions, to license the rights to practice the invention.¹⁷⁸

However, the factual circumstances of *Kollar* provide little support for these stated justifications. The court’s holding that the §102(b) trigger was delayed for over a decade because the 1980 transaction took the form of a license is not justified.¹⁷⁹ *Kollar* timely filed for patent protection shortly after the agreement with Celanese, an application which yielded four patents for production of ethylene glycol.¹⁸⁰ Even though *Kollar*’s invention for producing dialkyl peroxide was ready for patenting, he inexplicably waited until 1995 to file the application.¹⁸¹ Contrary to the court’s logic, the issuance of four other patents

¹⁷⁴ *Id.*

¹⁷⁵ See 35 U.S.C. § 101 (“Whoever invents or discovers any *new* and useful *process* . . . may obtain a patent therefor, subject to the conditions and requirements of this title.”).

¹⁷⁶ Thompson, *supra* note 19, at 37 n.5 (quoting *STX, LLC v. Brine Inc.*, 211 F.3d 588, 590 (Fed. Cir. 2000)).

¹⁷⁷ *In re Kollar*, 286 F.3d 1326, 1334 (Fed. Cir. 2002).

¹⁷⁸ Thompson, *supra* note 19, at 68.

¹⁷⁹ *Id.*

¹⁸⁰ Thompson, *supra* note 19, at 68 n.179 (detailing that U.S. Pats. Nos 4,412,084, 4,412,084 and 4,393,352 are entitled “Process for Producing Ethylene Glycol” and “are related to the parent application filed September 2, 1980” which issued as “Production of Ethylene Glycol By Reaction of Methanol, an Organic Peroxide and Formaldehyde U.S. Pat. No. 4,337,371 assigned to Celanese Corporation”).

¹⁸¹ *Id.* at 68.

demonstrates that “Kollar/Celanese [possessed] sufficient resources at the time of the 1980 license to file patent applications within a year of creating the license.”¹⁸²

Moreover, the Federal Circuit’s holding that the primary benefit of commercializing an invention occurs only once the invention is commercialized is illogical. Kollar’s company stood to make hundreds of thousands of dollars annually during the multi-year research and development phase, regardless of whether his invention ever proved suitable for large-scale manufacturing.¹⁸³ Though it is unclear what amount Kollar received, he undoubtedly benefitted through the Celanese agreement.¹⁸⁴ Nevertheless, the successful commercialization of said process was irrelevant.

The assumption that successful commercialization is the key to the on-sale bar is largely derived from the court’s overly broad generalization “that there is ‘normally’ a sale when money changes hands, but a process cannot be sold until it is performed.”¹⁸⁵ Contrary to the court’s opinion, “[m]oney can change hands in return for any disposition of rights in an invention — a sale, license, option, share, or any of countless other arrangements that clever lawyers may devise.”¹⁸⁶ For instance, “[r]ights can be sold in a manufacture, composition, or even a device without an embodiment itself being sold or title passing to any tangible item.”¹⁸⁷ Moreover, “[a]n inventor can license the right to manufacture a device not reduced to tangible form without the legal framework being any different from a process license.”¹⁸⁸

The prevalence of licensing in the chemical industry serves as further evidence that the primary benefit of a licensing exception is enjoyed by those who possess the resources needed for a patent application. Licensing of chemical process inventions is a multi-billion-dollar industry¹⁸⁹ and is regarded by many firms as part of their overall return on investment in technology.¹⁹⁰ Excluding SEPs, most companies that engage in licensing possess sufficient downstream assets to commercialize their inventions.¹⁹¹ In addition to the overbreadth issue, the *Kollar* rule excludes inventions valuable enough to patent and are continually licensed for substantial compensation. This issue arises primarily because of the

¹⁸² *Id.*

¹⁸³ *Id.* at 68-69.

¹⁸⁴ *Id.* at 69.

¹⁸⁵ *Id.* at 70 n.190.

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*

¹⁸⁹ *Chemical Licensing Market Size Forecast to Reach \$15.85 Billion by 2025*, *supra* note 117.

¹⁹⁰ Arora & Fosfuri, *supra* note 103, at 327.

¹⁹¹ *Id.* at 326.

court's emphasis on whether the process has been commercialized without strictly defining what qualifies as being commercialized other than an exception for sales of an intangible benefit such as process patent licensing.¹⁹² As a result, the Federal Circuit, post-*Kollar*, has enabled premature exploitation of research tools, such as a method or system of techniques used to identify drug candidates early in the research and development process but do not produce a tangible product.¹⁹³ While *Bayer AG* did not address the on-sale issue, the case's findings indicate that, under the *Kollar* licensing exception, an inventor could continue to patent their process indefinitely without triggering the on-sale bar if that method would never be used to manufacture a tangible product for sale.¹⁹⁴

The Federal Circuit in *BASF* expanded upon this limitation, holding that an exclusive license is not a sale as “the essential features of the claimed process [] were not embodied in a product sold or offered for sale before the critical date.”¹⁹⁵ Moreover, the panel found that the acquisition of Celanese by Hoechst did not amount to a sale of the claimed process since “there was no product sold that embodied the essential features of the [Celanese process].”¹⁹⁶ As an alternative, the Federal Circuit should recognize licenses as a means of commercially exploiting an invention and thus a trigger for §102(b). If the invention is ready for patenting and the license is not primarily for experimentation, licensing the invention should have the same consequences as selling a product the invention is used to make. Either way, the invention is “on-sale” because it has been commercially exploited.

Eliminating the licensing exception would enforce compliance with the one-year grace period under the on-sale bar. Under that scenario, the inventor and/or his licensee would continue to have a full year after entering or offering a licensing agreement to file for a patent application.¹⁹⁷ Moreover, the lack of a licensing exception would also eliminate the arbitrary distinction regarding the type of invention which is the subject of a commercial sale for the on-sale bar.

¹⁹² See *In re Kollar* 286 F.3d 1326, 1333 (Fed. Cir. 2002) (“We cannot articulate in advance what would constitute a sale of a process in terms of the on-sale bar. . . . We hold only that licensing the invention, under which development of the claimed process would have to occur before the process is successfully commercialized, is not [] a sale.”).

¹⁹³ See, e.g., *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367 (Fed. Cir. 2003) (finding, in a case involving a patented method used outside the United States to identify substances that inhibited or activated particular proteins performed to identify a drug that later produced and imported into the United States, that 35 USC § 271(g)'s prohibition on the importation or sale of a product “made” by a patented process applied only to physical products that are manufactured and does not extend to information).

¹⁹⁴ Thompson, *supra* note 19, at 66.

¹⁹⁵ *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 970 (Fed. Cir. 2020).

¹⁹⁶ *Id.*

¹⁹⁷ 35 U.S.C. § 102(b).

Under this newly redefined on-sale bar, cases like *BASF v. SNF* would result in the licensee's prolonged use of a process invention within the United States for which the licensee provided monetary consideration qualifies as prior art. In conjunction, the court would find that the licensee's financial benefit derived from the invention would provide sufficient evidence that the process had been commercialized for purposes of the on-sale bar.

IV. CONCLUSION

BASF v. SNF is the latest in a patchwork of cases involving the on-sale bar, a rule designed to confine patent monopolies to their statutory duration. The Federal Circuit's current *Kollar*-based approach creates an exception for licenses, under which licensing a process does not count as commercial exploitation for purposes of the on-sale bar.¹⁹⁸ This standard ignores the extent to which a licensing exemption enables premature commercial exploitation of the patent monopoly and creates uncertainty by requiring disparate treatment of different classes of inventions under the statute.

BASF v. SNF, as well as this Note's study of licensing in the chemical industry, demonstrate the current system's flaws as it relates to the on-sale bar. For instance, selling a tangible product and performing a process for consideration is sufficient to commercialize an invention.¹⁹⁹ However, teaching the process to another while also providing considerable aid in implementing the technology necessary to practice the invention is not a "sale."²⁰⁰

Similarly, the Federal Circuit's unnecessary over-emphasis on a tangible embodiment of an invention directly contradicts *Pfaff's* holding that an invention subject to an offer for sale can be an idea's physical embodiment *or* the idea itself. Other legal authorities, such as the USPTO and Federal Circuit Judge Gajarsa, have made similar arguments – the operation of the §102(b) on-sale bar requires only a commercial sale or offer for sale of an "invention" more than one year prior to the filing of the application.²⁰¹ Whether said invention was a tangible product or an intangible process should be irrelevant when deciding under the on-sale bar. This Note proposes a return to the more contractually based on-sale bar established in *Pfaff*. It recognizes that an invention may become just as commercialized through a licensing agreement as it can by a traditional offer to sell.

¹⁹⁸ *BASF*, 955 F.3d at 970.

¹⁹⁹ *Id.* at 969.

²⁰⁰ *Id.*

²⁰¹ *Minton v. Nat'l Ass'n of Sec. Dealers, Inc.*, 336 F.3d 1373 (Fed. Cir. 2003).

BASF v. SNF illustrates the two key problems with the current on-sale bar. In *BASF*, the fact that the IP rights were transferred from Sanyo to Celanese under a licensing agreement was the only condition that prevented a finding that the agreement constituted a sale.²⁰² This was found despite the licensing agreement displaying both an offer and acceptance as well as providing Celanese with the knowledge, capacity and technical assistance necessary to put the invention into practice.²⁰³

The Sanyo-Celanese agreement is a larger reflection of licensing practices in the chemical industry. An analysis of which contradicts the stated objectives for a licensing exception under *Kollar*: (1) enabling public access to inventions produced by inventors, whom themselves do not have the resource to put the invention into practice; and (2) disallowing enjoyment of a patent monopoly beyond the one-year window established under § 102(b).²⁰⁴ Contrary to the goal of assisting inventors who do not possess the necessary resources to implement their process inventions, licensing in the chemical industry demonstrates that it is not solely those less-well-off inventors who benefit from licensing agreements. For instance, while SEPs were able to profit through licensing despite lacking the downstream assets required to commercialize their inventions, licensing has also become a key revenue generator for larger companies.²⁰⁵ It was the prevalence of SEFs and inter-firm competition that led to such widespread process licensing throughout the chemical industry despite many of these firms having the capability to patent their process inventions.²⁰⁶

Moreover, the Federal Circuit's *Kollar*-based licensing exception creates an arbitrary distinction between classes of inventions - an invention can only be sold through a physical embodiment or through performing the process for compensation.²⁰⁷ This distinction is found nowhere in the statutory text and is directly adverse to the Court's holding in *Pfaff*, that an invention may be a tangible product or intangible idea so long as it is sufficiently developed.²⁰⁸ In contrast to *Pfaff*'s consistent, contract-based standard, the *Kollar* standard differentiates between disparate classes of inventions and thus enables premature commercial exploitation. Eliminating process inventions from patentability because they result in an intermediate rather than an end product allows the

²⁰² *BASF*, 955 F.3d at 970.

²⁰³ *Id.*

²⁰⁴ *In re Kollar*, 286 F.3d 1326, 1334 (Fed. Cir. 2002).

²⁰⁵ *Arora & Fosfuri*, *supra* note 103, at 326.

²⁰⁶ *See Arora*, *supra* note 104, at 399 (explaining that even the largest chemical firms license out their technology).

²⁰⁷ *BASF*, 955 F.3d at 969.

²⁰⁸ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67 (1998).

inventors of these processes to benefit from their invention indefinitely through licensing practices. Moreover, the inventor may practice their invention without fear of triggering the one-year period and being considered prior art. Such a situation undermines the on-sale bar's efficacy and the overall patent system.

While eliminating the licensing exception may impact access to inventions whose inventors are short on resources, elimination of the licensing exception would improve the overall patent system in two respects: First, it limits premature commercial exploitation by treating all classes of inventions equally. Second, the original pre-licensing exception approach is more reflective of the way licensing agreements are commonly used – a “sale” of a licensor's right to practice their process invention.