The Unintended Consequences of Stanford v. Roche

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BACKGROUND

In Stanford v. Roche, the Supreme Court, in a decision written by Chief Justice Roberts, held that the Bayh-Dole Act (Act) does not vest initial title to patents resulting from federally funded research in universities. Rather, the Court found that the 220 year old Patent Act norm that vests initial title to patents in inventors remained undisturbed by the passage of the Bayh-Dole Act. The practical consequence of the Court’s decision is that Stanford’s claim to patent ownership based on the Bayh-Dole Act, and an earlier patent assignment in an employment contract executed by the inventor at the time of employment, was trumped by Roche’s claim to patent ownership by virtue of a subsequent assignment by the inventor to Cetus. (Roche acquired Cetus.)

In reaching its conclusion, the Court carefully parsed numerous sections of the Bayh-Dole Act which it found confirmed its conclusion that the Bayh-Dole Act did not operate to vest initial title to faculty inventions made with federal research assistance in universities. The Court also relied, as did the Federal Circuit lower court decision, on the future tense language used in the Stanford assignment agreement and the present tense language used in the Cetus assignment agreement. The Stanford assignment agreement stated: “I [the employee-inventor] agree to assign or confirm in writing to Stanford and/or Sponsors that right, title and interest in … such inventions as required by Contracts or Grants.” Stanford’s ‘Contracts or Grants’ included contracts with the federal government for federally funded research which is governed by the Bayh-Dole Act. The Cetus assignment, on the other hand, stated: “I [researcher-inventor] will assign and do hereby assign to Cetus, my right, title and interest in each of the ideas, inventions and improvements [made] as a consequence of [my] access to Cetus.” The Court affirmed the Federal Circuit’s holding that the Stanford assignment agreement “constituted a mere promise to assign rights in the future whereas the Cetus assignment agreement “itself assigned [the inventor’s] rights in the invention to Cetus.” The Court suggested in its conclusion that if Stanford had received an “effective assignment” of the invention (i.e. a present tense assignment of the inventor’s rights), the result would have been “pretty much” what Stanford sought by arguing that the Bayh-Dole Act placed initial title to the invention at issue in Stanford.

The Federal Circuit decision in Stanford v. Roche relied on its 1991 decision in FilmTec Corp. v. Allied Signal Inc. In FilmTec, the inventor’s employer was engaged in research and
development work for the United States under a contract which provided that the employer “agrees to grant and does hereby grant to the Government the full … right, title and interest in [any invention discovery or improvement made in the course of this contract]. There was no evidence in the case that the inventor executed an employment agreement that either granted, or required the inventor to grant, his inventions to the employer. After the inventor terminated his employment, he filed a patent application on an invention directly related to his work for his former employer and assigned the patent application to a new company (FilmTec) formed by the inventor and three other persons. The assignment agreement was recorded in the PTO pursuant to Section 261 of the Patent Act. The trial court had concluded that as a matter of law, even if the inventor had made the invention prior to terminating his employment, the Government and former employer could have no more than an equitable title to the patent which title would have been voided by the subsequent assignment and recording of legal title by the inventor’s assignee. The Federal Circuit reversed the trial court’s holding on this point.

According to the Federal Circuit, an assignment of rights in an invention made prior to the existence of the invention is an assignment of an “expectant interest” and an assignment of an “expectant interest” can be a valid assignment. The Federal Circuit then held:

Once the invention is made and an application for patent is filed, however, the legal title to the rights accruing thereunder would be in the assignee [of the expectant interest] … and the assignor-inventor would have nothing remaining to assign.

The Federal Circuit cited only one dubious authority for this holding and did not explain exactly how the “expectant interest” became transformed into a legal title other than to note that “no further act would be required once an invention came into being [because] the transfer of title would occur by operation of law.”

The Federal Circuit’s Stanford decision also addressed Stanford’s claim that it was a bona fide purchaser for value under Section 261 of the Patent Act. Stanford claimed it acquired the faculty-inventor’s rights to the invention by way of an assignment of legal title after the patent application was filed and that neither Cetus nor Roche ever recorded their interests with the Patent and Trademark Office (PTO). The Federal Circuit rejected Stanford’s argument that it acquired legal title to the patent without notice of the Cetus agreement because Stanford “had at

10 939 F.2d 1568 (Fed. Cir. 1991).
11 Id at 1570.
12 Id at 1571.
13 Id at 1569-1570.
14 Id at 1579.
15 Id. at 1572. The only authority cited by the Federal Circuit for this holding was 28 U.S.C. § 1498 (1988) which states: “Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner’s remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his reasonable and entire compensation for such use and manufacture.” It is not clear what support for the court’s holding 28 U.S.C. § 1498 provides.
16 939 F.2d 1568, 1573.
17 583 F.3d 832, 842-843.
18 Id at 843.
least constructive or inquiry notice of the [Cetus agreement].”19 The Federal Circuit, again citing to its FilmTec decision, found that “An organization [in this case Stanford] can be charged with notice of its employees’ [in this case faculty-inventors] assignments.”20

The dissenting opinion in the Supreme Court’s Stanford decision, written by Justice Breyer, argues generally that there are special public policy reasons underlying the Bayh-Dole Act (to commercialize inventions for beneficial public use) that are best served by leaving the rights in inventions made with federal funds in the hands of the university recipients of those funds.21 In Justice Breyer’s view, allowing individual inventors to lawfully assign inventions (produced with public funds) to third parties without the restrictions, conditions and allocation rules contained in the Bayh-Dole Act “is inconsistent with the Act’s basic purposes … [and] may significantly undercut the Act’s ability to achieve its objectives.”22

Justice Breyer suggested that one legal route to an interpretation more consistent with the Bayh-Dole Act’s objectives would be to set aside the Federal Circuit’s interpretation of the agreements in the case and its related legal doctrine.23 In Justice Breyer’s view, the Federal Circuit’s distinction between “agree to assign” and “do hereby assign” is a slight linguistic difference in contract language that “make(s) too much of too little.”24 According to Justice Breyer, prior to the Federal Circuit’s FilmTec decision “patent law appears to have long specified that a present assignment of future inventions … conveyed equitable, but not legal, title.”25 Justice Breyer noted that the Federal Circuit provided no explanation in its FilmTec decision for this significant change in the law and questions why the Court majority should prefer the Federal Circuit’s FilmTec rule to the much older rule that would treat both the Stanford and Cetus agreements as creating merely equitable rights.26 If the Stanford and Cetus agreements were both treated as creating only equitable rights in the parties, Justice Breyer would find in favor of Stanford as between the two competing equitable claims because Stanford’s contract came first in time and because Stanford obtained a post-invention legal assignment of the patent rights.27

Finally, Justice Breyer stated that his understanding of the majority opinion was that it did not foreclose similarly situated parties in the future from raising the issues of pre-invention assignments, and the law governing the priority between expectancy interests, equitable interests and legal titles.28

ANALYSIS

1. Initial Title to Patent Applications and Issued Patents

19 Id.
20 Id.
21 2011 WL 2175210 at 11.
22 Id. at 13.
23 Id at 14.
24 Id at 15.
25 Id.
26 Id.
27 Id at 17.
28 2011 WL 2175210 at 17.
The Supreme Court majority’s statutory analysis of the Bayh-Dole Act’s provisions clearly shows that Congress did not intend to overturn the fundamental proposition of patent law that initial ownership of patents is vested in inventors. First, the Court cites other federal legislation in which Congress expressly provides that title to certain inventions vest in the United States and not the inventor, and notes the absence of any express language in the Act that would vest title in universities and deprive inventors of their interests in federally funded inventions.29

Second, Section 201(e) of the Act defines “subject invention” (an invention subject to the provisions of the Bayh-Dole Act) as “any invention of the contractor conceived or first actually reduced to practice in the performance of work under a [federal research] funding agreement.” (The Act refers to a “contractor” not a “university.”30 I will use these terms interchangeably in this paper.) Stanford argued that the phrase “invention of the contractor” included all inventions made by the contractors’ employees with aid of federal funding.31 The Court found that Stanford’s interpretation of the phrase “assumes Congress subtly set aside two centuries of patent law in a statutory definition.”32 In addition, the Court “rejected the idea that mere employment is sufficient to vest title to an employee’s invention in the employer.”33

Third, Section 202(a) of the Act provides that a contractor may “elect to retain title to any subject invention.”34 Stanford argued that the word “retain” implies that the contractor already has title to the subject invention.35 Again, the Court rejects the argument that the Bayh-Dole Act vests initial title to inventions made with federal funding in contractors. The Court states that the Bayh-Dole Act “simply assures contractors that they may keep title to whatever it is they already have” by virtue of a transfer of title by the inventor.36

Fourth, Section 202(d) of the Act provides that a federal agency may “grant requests for retention of rights by the inventor … [i]f a contractor does not elect to retain title to a subject invention.”37 The Court finds that the word “retention” assumes “that the inventor had rights in the subject invention at some point, undermining the notion that the Act automatically vests title to federally funded inventions in federal contractors.”38

2. The Nature of Expectancy Interests
Although the Court’s conclusion that the Bayh-Dole Act does not vest initial title to patents resulting from federally funded research in contractors is highly persuasive, its conclusion that Cetus’ assignment agreement was superior to Stanford’s assignment agreement is far less so.

The Court’s conclusion that the Cetus’ present tense assignment was superior to the Stanford future tense assignment relied on its adoption of the Federal Circuit’s Stanford holding that the

29 Id. at 7.
31 2011 WL 2175210 at 8.
32 Id.
33 Id.
36 Id.
38 2011 WL 2175210 at 9.
Stanford assignment constituted a promise to assign rights in the future whereas the Cetus assignment constituted a present conveyance of rights in the invention. The Federal Circuit’s holding in Stanford, in turn, relied on its decision in FilmTec in which the court held that an assignment of rights in a future invention is an assignment of an expectant interest, and that an expectant interest vests legal title in the assignee once the invention is made and patent application is filed without the need of any further act by the assignor. According to the Federal Circuit, this transformation of an expectant interest into a legal title would occur by operation of law.

There are serious legal and practical flaws in the Federal Circuit’s reasoning on this point.

3. Assignment of Expectancy Interests Under Section 261 of the Patent Act
Section 261 of the Patent Act prescribes how legal title to patents and patent application may be transferred. Section 261 states: “Applications for patents, patents, or any interest therein, shall be assignable in law by an instrument in writing.” Clearly, the Patent Act contemplates that a transfer of legal title to patents and patent applications can only be accomplished after the patent has issued or the patent application has been filed. The phrase “any interest therein” in Section 261 does not alter the Patent Act’s basic requirement that legal title to patents and patent applications can only be transferred after a patent has issued or a patent application has been filed. The phrase “any interest therein” refers directly to patent applications and issued patents and covers situations in which submitters may be joint inventors or multiple assignees.

Chapter 300 of the Patent Office Manual of Patent Examination Procedure (MPEP) also makes abundantly clear that only assignments of patent applications and issued patents will be recorded in the PTO and that the PTO will only accept and record copies of original assignment documents. The MPEP also requires, with one exception, that the patent application number, or the issued patent number, against which the document is to be recorded be included in the assignment document submitted to the PTO. The one exception is when the assignment agreement is executed concurrently with, or subsequent to, the preparation of the patent application, but before the application is filed. Under these circumstances, the assignment must be identified by the names(s) of the inventors and the title of the invention. The employee-inventor must, of course, still execute the assignment agreement.

Furthermore, every assignment submission to the PTO must include a cover page (Recordation Form Cover Sheet) which states the Nature of Conveyance and Execution Date, the Issued Patent

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39 Id. at 6.
40 583 F.3d 832, 841-842.
41 Id.
42 The Manual of Patent Examination Procedure (MPEP) provides that an assignment of record can be made in the PTO in two different ways for two different purposes: (1) An assignment recorded in the assignments records office of the PTO that provides legal notice to the public of an assignment; and (2) An assignment recorded in the file of a patent application, patent, or other patent proceeding in order to allow the assignee to take action in the application, patent or other patent proceeding. MPEP Section 300 V.
43 The MPEP provides that other documents not affecting title may be recorded at the discretion of the Director. Examples of these other documents are license agreements and security interests. MPEP Section 313.
44 See e.g., MPEP Section 302.07(D).
45 MPEP Section 302.03.
Number or the New Patent Application Number and the Total Number of Applications and Patents Involved. A party requesting recordation of an assignment or other interest can only do so after a patent application has been filed, or a patent has been issued, and the PTO has assigned a patent application number or issued patent number. Again, the only exception to this requirement is when an assignment is executed after a patent application has been prepared, but before the patent application has been filed, in which case the assignment must be identified by the name(s) of the inventors and the title of the invention. In either case, a legal assignment of a patent application cannot occur until the invention has been made, a patent application has been prepared or filed, and the inventor has executed a written assignment agreement.

The practical problem with an attempt to file a written expectant interest in a future patent is that there is no patent application or issued patent with which to associate the expectant interest. Even if the PTO would accept the filing of a written expectant interest, in the absence of an association with an identified patent application or issued patent, the written expectant interest would not be searchable and could not provide notice to the public.

It would seem, therefore, that the Federal Circuit’s notion of an expectant interest transforming into a legal title by operation of law, without any further act on the part of the transferor, is a fiction which flies in the face of legal and practical realities. The only way legal title in an invention can be transferred from an inventor to another party is through a written document executed after a patent has issued, or after, or concurrently with, the filing of a patent application. It does not matter whether the employee-inventor has signed an employment agreement in which he or she has agreed to presently assign patent rights in future inventions. Legal title cannot pass to the employer until an assignment document is executed after a patent has issued or a patent application has been filed, and the assignment document is recorded with the PTO.

Recording an assignment document with the PTO is also necessary to protect the assignee from potential claims that could be made by a subsequent assignee. The last paragraph of Section 261 provides:

An assignment, grant or conveyance [of a patent application or patent] shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.

Because an expectant interest cannot be filed and recorded with the PTO, it cannot provide notice to subsequent purchasers (assignees) and mortgagees, and can be voided by any subsequent legal assignment or mortgage.

4. Reconsidering Stanford and FilmTec

46 MPEP Section 302.07.
47 MPEP Section 302.03.
48 Id.
49 See supra note 42.
Accepting that both the Stanford and Cetus agreements created, at best, expectancy interests in the parties at the time the agreements were executed, Stanford’s subsequent filing of the patent applications on the inventions, and subsequent assignment of rights in the patent applications from the inventors, would transfer legal title to the inventions to Stanford which legal title would clearly be superior to Cetus’s contract expectancy interest whether or not it was couched in terms of a present or future transfer of interest.\textsuperscript{51} Neither the Supreme Court majority nor dissenting opinion made any mention of Section 261 of the Patent Act. Again, the Court majority adopted in its entirety the Federal Circuit’s holding in \textit{Stanford} that Cetus’s expectancy interest was transformed as a matter of contract law into legal title when the patent application was filed by Stanford.\textsuperscript{52}

The Federal Circuit, however, did consider Section 261 in its \textit{Stanford} decision, but only as it applied to Stanford’s status as a bona fide purchaser for value of the assignment of the patent application, not as it applied to Stanford’s status as a legal assignee of the patent application that would prevail over Cetus’s expectancy interest.\textsuperscript{53} Stanford’s status in the case was not as a bona fide purchaser for value of the assignment of the patent application because a bona fide purchaser for value status only arises when there has been a prior assignment of legal title to the patent application or issued patent which has not been timely recorded. Stanford was as the first assignee of legal title to the patent applications which it timely recorded. Under these facts, Stanford’s perfected legal title to the patents should have prevailed over Cetus’ contract expectancy interest.

The Federal Circuit also considered Section 261 in \textit{FilmTec}.\textsuperscript{54} Again, however, the Federal Circuit’s consideration of Section 261 was only in the context of FilmTec’s status as a bona fide purchaser for value, not as the first assignee of legal title to the disputed patent which had been filed with the PTO.\textsuperscript{55} As the first assignee of legal title to the disputed patent, FilmTec should have prevailed over the Government’s indirect expectancy interest in the patent. Interestingly, the Federal Circuit decision recognizes that Section 261 is only concerned with cutting off prior legal interests. The court stated:

\begin{quote}
Although the statute [Section 261] does not expressly so say, it is clear that the statute is intended to cut off prior legal interests, which the common law rule did not.\textsuperscript{56}
\end{quote}

The district court decision in \textit{FilmTec} is consistent with this analysis.\textsuperscript{57} The district court in \textit{FilmTec} held that “even if the invention was made while [the inventor] was employed at [the employer-government contractor], under the contract the Government could have no more than

\textsuperscript{51} This is the conclusion reached by Justice Breyer in dissent. \textit{See supra} note 27.

\textsuperscript{52} \textit{See supra} note 7.

\textsuperscript{53} The Federal Circuit rejected Stanford’s status as a bona fide purchaser for value because it found that Stanford could be charged with notice of its faculty-employee assignments. This finding would be surprising to many university deans and administrators.

\textsuperscript{54} 939 F.2d 1568.

\textsuperscript{55} \textit{Id} at 1573-1574.

\textsuperscript{56} \textit{Id}.

an equitable title to the patent, which title cannot be raised as a defense by [an alleged patent] infringer."\(^{58}\) The district court specifically found that:

[T]he Government’s rights in an invention discovered by an employee while under contract are equitable, and are not available as a defense by the alleged infringer against the legal title holder.\(^{59}\)

5. The Problem of the Unethical Employee-Inventor\(^{60}\)
Under my analysis of the Stanford and FilmTec line of cases, employment agreements entered into at the time of hire under which the new employee agrees to assign, or does hereby assign, his or her future invention rights to the employer would always be vulnerable to an unethical employee-inventor who files a patent application in his or her own name. This would be true in the case of a faculty-inventor and a university employer, and also in the case of a for-profit employee-inventor and a for-profit employer.\(^{61}\) In both cases, the employer could only obtain legal title to a patent application or issued patent by means of a written assignment agreement executed by the employee-inventor after, or concurrently with, the filing of a patent application, or the issuance of a patent.

The employer would have a breach of contract claim against the unethical employee. However, it is unlikely that the employer could recover the full amount of damages suffered as a result of losing legal title to the patent application or issued patent. Employees rarely have pockets deep enough to make employers whole under these circumstances. It is also doubtful whether the employer could obtain specific performance of the expectancy contract. If the unethical employee refused to execute an assignment agreement in favor of the employer, the employer would not have a written document to file and record with the PTO.\(^{62}\) In addition, there is the question of whether the owner of the initial legal title to a patent application or issued patent can be compelled to assign that title to an employer on the basis of an expectancy contract. If employers can compel employee-inventors to assign their initial legal title to patent applications and issued patents, the result would be much the same as if the employers themselves received initial legal title to inventors’ inventions – the result emphatically rejected by the Supreme Court. The employers’ predicament with respect to the unethical employee-inventor would be more dire in the case of an employee-inventor who assigned his legal title to a patent application or issued patent to a third party and the third party then filed and recorded the assignment with the PTO.

\(^{58}\) *See supra* note 52 at 1570.

\(^{59}\) *Id.*

\(^{60}\) I use the term “unethical employee-inventor” as a shorthand term to discuss the problem raised. Disgruntled faculty members and for-profit employees who would file patent applications in their own names may well believe they are not acting in an unethical manner, but rather fairly obtaining the benefits of their creativity.

\(^{61}\) If, as the Supreme Court holds, initial title to patents does not vest in universities, even under the special circumstances of the Bayh-Dole Act, it would appear there is even less justification for initial title to patents vesting in for-profit employers where there are no such special circumstances.

\(^{62}\) Depending upon the facts, a for-profit employer could claim a shop right in an employee’s invention. A shop right is a nonexclusive, non-transferable license to the employer to use the employee’s invention for the employer’s business purposes. A shop right does not give legal title to an invention to the employer. The employee retains legal title to an invention and can exploit the invention or license the invention to third parties, including competitors of the employer. *See Gregory E. Upchurch, 2 IP Litigation Guide: Patents & Trade Secrets § 14:40 (2011); Glenda K. Harnad, 30 C.J.S. Employer-Employee § 149 (2011).*
There are two possible arguments that an employer could assert against an assignee of legal title from an unethical employee-inventor in order to void the assignment: (i) the assignee had notice of the employer’s prior expectancy interest at the time of the assignment and (ii) the assignee engaged in inequitable conduct or fraud on the PTO by attempting to record an assignment when it had notice of the employer’s prior expectancy interest.

The first argument is unlikely to succeed because the issue of notice of a prior interest in a patent application or issued patent only arises in the case of a party claiming bona fide purchaser status under section 261 with respect to a prior legal interest. In the case of an assignee of a patent application or issued patent from an unethical employee, the assignee would be seeking to record the first assignment of legal title and, therefore, would not be claiming the status of a bona fide purchaser for value without notice as against a prior, unrecorded legal interest.

The second argument is unlikely to succeed because the doctrines of inequitable conduct and fraud on the PTO have been confined to matters involving the prosecution of patent applications such as failure to disclose known prior art or failure to disclose prior public use. The already controversial doctrines of inequitable conduct and fraud on the PTO would become even more so if they were extended to filing of assignments of patent applications and issued patents. In addition, the MPEP states that:

[The] recording of the assignment is merely a ministerial act; it is not an Office determination of the validity of the assignment document nor the effect of the assignment document on the ownership of the patent property.

Unlike the prosecution of a patent in which the Patent Act requires the disclosure of specific information and the PTO carefully scrutinizes that information, there is no such required disclosure or PTO scrutiny in the case of assignment documents. In the absence of such required disclosure and scrutiny, a claim of inequitable conduct or fraud on the PTO would seem tenuous.

**CONCLUSION**

The first, and most obvious, conclusion from the Stanford line of cases is that universities and for-profit employers must use present tense language in the assignment of patent rights in employment agreements. I assume all universities and for-profit employers are currently racing to redraft their employment agreements to include such present tense language.

However, as I have tried to explain, this may well not be sufficient to protect universities and for-profit employers from the risk that employee-inventors may file patent applications in their own names and assign these patent applications to third parties who can file and record these assignments with the PTO. If my analysis is correct, this is obviously a gaping loophole in patent and licensing law that puts at risk tens of billions of dollars of patent rights. The questions are how did we get to this point and what can be done now.

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63 See supra notes 53-54 and accompanying text.
64 See e.g., JOHN W. SCHLICHER, 2 PATENT LAW, LEGAL AND ECONOMIC PRINCIPLES § 10:3 (2d ed.) (2011); Jessica Bromall, Rod S. Berman, Fraud in the Trademark Office and Fraud in the Patent Office: Different Standards But Both on Appeal, 21 No. 6 INTELL. PROP. & TECH. L.J. 1 (2009).
65 MPEP Section 301 V.
The Federal Circuit’s 20 year old FilmTec decision is at the root of the problem. Perhaps the Federal Circuit was prescient in 1991 and foresaw the problems for employers if they were required to obtain written assignments of patent rights from inventors after inventions were made in order to acquire a recordable legal title. The fiction of an automatic transformation of an expectancy contract interest into a legal title may have seemed a convenient means to finesse this serious and complex problem. It appears writers paid little attention to the import of the court’s holding in FilmTec. The only writing directly on point merely reported the court’s FilmTec decision without any commentary or analysis. The problem remained buried until the Federal Circuit was required to address it once again in Stanford v. Roche. The court provided no additional analysis of the problem in Stanford v. Roche and simply cited to its earlier FilmTec decision.

The Supreme Court’s decision in Stanford v. Roche was almost entirely concerned with the question of initial legal title to patents as between faculty-inventors and universities under the Bayh-Dole Act. The Court’s only references to the competing rights as between Stanford and Roche was in its adoption of the Federal Circuits holding in the case and its concluding admonition that if Stanford had received an “effective” assignment its claim would have prevailed over Cetus’ claim. Of course, Stanford allowed the Court to ignore the question of priority as between Cetus’ expectancy interest and Stanford’s legal title by resting its argument entirely on its claim to initial legal title under the Bayh-Dole Act. It is not clear why Stanford chose to do this. Perhaps because Stanford wanted to establish once and for all the primacy of universities’ patent rights over faculty-inventors’ patent rights. Or perhaps because Stanford also recognized the problem of having to obtain written assignments from faculty-inventors after an invention has been made and a patent application filed in order to acquire legal title to patent rights. Had the Court found for Stanford on its Bayh-Dole Act claims, this problem would have become moot. Unfortunately for Stanford, it lost on both its Bayh-Dole Act claims and on its potential claim to priority of legal title by virtue of its faculty written assignments and its filed patent applications.

I do not know at this time of any private law contract means that would solve this problem. Employers could ask newly hired employees to execute blank assignment agreements at the time of hire and fill in the patent application numbers at a later date. But again, if an unethical employee-inventor terminates his or her employment and proceeds to file a patent application in his or her own name, the employer will not be aware of this fact until the patent application is published 18 months after filing, if the employee-inventor intends to obtain foreign patent rights. Termination of employment and breach of contract damages are the greatest determinants to the employee-inventor filing a patent application in his or her own name. Termination of employment would be most costly in the case of a faculty-inventor who has received tenure. The value of a tenure contract over a 35 year academic career can range from $2.5 million to over $5 million depending upon the starting salary and annual raises. The unethical faculty-inventor

67 See supra note 5, note 8.
68 If a new faculty member’s starting salary is $100,000 with $40,000 of associated fringe benefits, and the faculty member receives an annual raise of 3%, the value of the tenure contract over 35 years would be in excess of $5 million. A starting salary of $100,000 is not unusual for research faculty at major research universities.
would have to calculate the potential gains from commercializing the invention alone to be in excess of the tenure annuity in order to risk termination of tenure. For the for-profit employee-inventor who has little or no job security, the calculation would be far different.

However, there are some management best practices that could be employed to lessen the risk of loss due to unethical employee-inventors. These management best practices would focus on closer monitoring of research by deans, department chairs and lab supervisors. These monitoring activities could include required, periodic research progress reports, regular meetings with researchers and other lab personnel and frequent reviews of lab notebooks. If an employer has good reason to believe that an employee-inventor is disclosing proprietary information to a third party, the employer can monitor the employee-inventor’s communications that use the employer’s servers and telephones.69

There are two public law means by which this problem could be solved. However, each entails considerable time and expense. First, Congress could amend Section 261 of the Patent Act to allow filing and recording of expectancy contracts. The PTO would then have to establish a new database indexed by the names of the employee-inventors who have executed employment agreements. This database would provide notice to any assignee from an unethical employee-inventor that the employee inventor has already executed an employment contract granting the employer an expectancy interest. But given the problems Congress has had in passing patent reform legislation, an amendment of Section 216 would seem problematic.

Second, the PTO on its own could proceed to establish an employee-inventor database and begin to accept filing of employment contracts by employers. This would seem to be a quicker and less costly solution than Congressional amendment of Section 216. However, the PTO is notoriously underfunded and overworked, and would be unlikely to undertake this new task on its own initiative.

A third, hybrid means to deal with the problem would be for research universities and technology-company employers to form a not-for-profit entity for the purpose of recording and indexing employment agreements containing expectancy interests to future inventions. The legal status of such a non-governmental, not-for-profit database is unclear. Nonetheless, it could serve as a repository of employment agreements which could provide actual or constructive notice to the PTO and patent assignees.

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