A Proposed "U.S. Public Patent Pool"

By Robert M. Kunstadt and Ilaria Maggioni

I. The Recognized Need for Patent Law Reform

Congress is now considering substantial modifications of the patent law.[1] Most everyone recognizes that the patent system needs to be rationalized to make it function more efficiently, reducing obstacles that now impede inventors, the public and the courts.[2] Reforms now under consideration—such as moving to first-to-file, improving post-grant review and fine-tuning standards for damages awards—represent political compromises among various industry groups, according to the ABA's Intellectual Property Law Section.[3] As such, they might not suffice for complete rectification.

Hence in the context of the current interest in patent law reform, it behooves commentators also to consider more thorough approaches, including even a rethinking of first principles underlying the entire concept of, and mechanism for, protection of inventors' work product. In that spirit, we offer this suggestion for a "U.S. Public Patent Pool," modeled after industry pools such as those used for facilitating the creation of CD hardware. The proposal also borrows philosophically from the recently-enacted federal health insurance mandate, in that in its strongest form it compels all inventors to participate—since 100 percent participation is essential to effective patent reform under this plan.[4]

1. T. Dutra, "IP Groups, Former PTO Chief Dudas Comment On House Panel Patent Reform Discussion," 80 *PTCJ* 48 (May 14, 2010).

2. S.A. Merrill, R.C. Levin, M.B. Myers, *A Patent System for the 21st Century*, National Academy of Sciences (2004).

3. T. Dutra, "ABA Intellectual Property Law Section Endorses Senate Patent Reform Amendment," 79 *PTCJ* 669 (April 2, 2010).

4. The constitutionality of mandatory health insurance is under attack by suits brought by the States on grounds of States' and individual constitutional rights ("Health Care Reform and the Courts," *NY Times* (May 20, 2010), p. A26; see *http://www.nytimes.com/2010/05/20/opinion/20thu1.html*). However, reform of the patent system is not subject to attack on such grounds since patent law is within the constitutional mandate of the Federal Government (under Article I, Sec. 8); and since applying for a patent is an inventor's own voluntary act. While Congress possesses a constitutional power to *grant* patents, inventors do not possess any corresponding right to receive a patent (except in the possible particular case of a due process violation); since Congress could, if it wished, entirely dispense with the patent system on a prospective basis.

II. Outline of the Proposed Plan

The proposed "U.S. Public Patent Pool" plan would make all patented inventions automatically (or alternatively—as an initial experiment—optionally) enter the "U.S. Public Patent Pool."

The U.S. Public Patent Pool system effectively establishes a "Berlin Wall" of logical and economic separation between questions of inventorship; and questions of exploitation. This permits fine-tuning of the system to promote economic efficiency and better accomplish the twin purposes of rewarding inventorship and promoting technological advancement.

Pursuant to this principle of separation, inventors will stand on an equal footing with the general public as far as the right to bid on exclusive or nonexclusive rights to even their own patented inventions. Nothing in the Constitution requires the patent law to give exclusive rights automatically or unconditionally to an inventor. Article I, Section 8, permits that result—but does not require it. Consistent with the Trademark Cases, 100 U.S. 82 (1879), Congress may enact an economically-rationalized patent system under its Commerce Clause powers.

Under the present system, disclosure of the invention to the public is the *quid pro quo* for the inventor's receiving a monopoly patent right for 20 years. Under the new system, the inventor would have to provide not only disclosure of the invention, but also to assign the right to receive royalties on the invention to the Public Pool. In return, the inventor will receive a claim on the annual proceeds of the Pool, distributed in accordance with the rules of the Pool.

The basic patent law principle of a "bargain" between the inventor and the public to reward the inventor financially, while benefiting the public with technological advancement, remains the same; only the terms of the bargain are altered.

Some standard-setting organizations already have compensation systems that are analogous: everybody contributes their IP in order to come up with a standard for, e.g., wireless communication or DVD recording. New parties that arrive later pay a royalty into the pool, which is split in some pre-arranged manner among the original contributors. Hence, the basic idea of a patent pool has proven its effectiveness in the real world. The present proposal is to universalize it.

III. Details of the Proposed Plan's Operation

All members of the public can bid in an online auc-

tion run by the Patent Office, for the right to license and enforce any patented invention participating in the U.S. Public Patent Pool.

An exclusive licensee (if any) may automatically enforce the patent.

A nonexclusive licensee (if no one bids for an exclusive license) may enforce the patent only with majority approval of all other nonexclusive licensees (on a first-come, first-approved basis) (similar to eBay's "Best Offer" procedure).

The Patent Office would provide bidding software for an online auction offering various license durations, annual minimums and other standardized license options (on a simple check-the-box basis).

The bidding software is crafted so as to convert all bids to Net Present Value for purposes of automatically comparing them and awarding the exactly-requested license rights to the highest bidder.

The Patent Office software would also administer the voting by nonexclusive licensees on proposals to enforce a nonexclusively-licensed patent (percentage of award to be retained by the enforcer, enforcer's qualifications and experience, and the like).

Standard annual remuneration from the total of all U.S. Public Patent Pool royalties collected by the Patent Office, is provided to inventors based on reported gross sales of their patented invention as percentage of total reported sales of all patented inventions (similar to ASCAP payments to songwriters of a portion of the performance royalties received by ASCAP from music-performing venues).

Alternatively, the inventor could be given a bid-in value equal to a multiple of the application fees, say 2x the amount of the fees. The bid-in value would give the inventor a head start over the general public, in acquiring rights to the invention. The amount of the bid-in multiple could be adjusted as experience shows most appropriate for rewarding inventors in the necessary amount but no more, unlike the present system in which the inventor has an effective bid-in value that is infinitely high and not adjustable at all.

Similarly, as an alternative the inventor could be rewarded with a standard percentage of the amount realized for the invention in the public pool auction. This could eliminate the need for possible special proceedings to assess extra reward for certain inventions, since the marketplace would determine the appropriate reward for each invention. Or, the pool system could provide a special appeal procedure in which an inventor could urge a justified deviation from the standard inventor's percentage, in the case of pioneering inventive activity. It would also be possible to administer a blended system, in which the inventor's reward was calculated in part by a standard amount of the total pool and in part by the amount realized on the particular invention, with a third part reserved for a merit adjustment if deserved.

The patent examiner might provide input on whether any merit adjustment is warranted, by grading each application for inventiveness as part of the examination process. Since patent examiners are familiar with the prior art technology already, and now have to assess inventiveness anyway on a pass/fail basis, it would not be substantially extra work for the patent examiners to grade inventiveness on a 1—10 scale. This might even help focus the examiners on the exact factors to be considered in making such judgments, by filling out a questionnaire listing the factors to be graded, and thus help the supervisors exercise better quality control over the examination process.

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IV. Implications for Patent Office Funding; Economic Incentives to Improve Patent Office Performance

In addition to the application fees it now receives, the Patent Office might be compensated (in part) from a small percentage of the Pool's royalty proceeds, considering the Patent Office's contribution in administering the online bidding system. This would help fund the Patent Office to improve examination quality.

In case a patent is invalidated in court, the Patent Office may have to suffer an appropriate financial penalty (perhaps a fixed sum towards reimbursement of attorneys' fees and costs), as a disincentive to issuing invalid patents with insufficient examination, just to enrich itself from royalties obtained on licensing of such patents by the Pool.

The royalty percentage received by the Patent Office, and the financial penalty on it for issuing a patent invalidated in court, could be finely calibrated over time to encourage evenhanded, quality work by the Patent Office in administering the patent system. Right now, the Patent Office pays no penalty at all for shoddy work. The entire cost of Patent Office failure falls variously on the inventor wrongly denied a patent; or on the needlessly-accused defendant.

V. The Pool Plan Applies Novel Marketplace Incentives to Apportion the Costs and Rewards of IP Protection

This U.S. Public Patent Pool system is now made feasible by the fact that advanced information technology reduces transaction costs (compare, e.g., eBay and the Google Book Project). Automated bidding and payment systems facilitate alignment of transaction outcomes with economic interests of the participants, at minimal cost (compare, e.g., the ticket-pricing software utilized by airlines). The PTO can learn from the private sector, following its lead to implement technological modifications not only in examining patents, but also in performing its real economic mission of promoting overall technological advancement in society. The Patent Office is, after all, part of the Commerce Department for a reason—to promote interstate commerce for the benefit of the economy.

For example, in a sailboat race, a small boat gets a computer-assessed rating so that it can compete fairly with a larger boat.[5] Similarly, an inventor (or perhaps a small inventor) could be allowed a bid-in credit in the auction of his/her own patent. The standard credit value could be re-assessed from time to time, as a general matter, depending on congressional judgment about how much to favor inventors. This provides a degree of precision for "fine-tuning" of the incentive to inventors, which is not present in the current patent system. Given modern computer technology, it should be an embarrassment that a sailboat race is conducted with more technological precision and sophistication than is our patent system.

Due to the split between invention and exploitation that inheres in the Patent Pool system, and since the inventor does not necessarily receive the actual royalties paid for the licensing of his/her invention out of the U.S. Public Patent Pool, the inventor has no great incentive to overbid for the patent rights, *vis-a-vis* what the general public is willing to pay.

The patent term might be revised to start only when someone licenses the patent. This would prevent that the work of an inventor who sees far into the future, cannot be profitably exploited because by the time the market is ready for the technology, the patent has expired so no exclusive rights are available to license any more. It might also incentivize licensees to bid sooner—since the longer the patent sits there unlicensed, the more likely that a competitor eventually licenses it and then asserts it against you, for the full patent term.

5. See: *http://ussailing.org/PHRF*

Licenses might be granted only subject to a statutory working requirement, so that inventions cannot be licensed just to take them off the market in order to protect older, inefficient technology from advanced competition.

VI. The Pool Plan can Account for Overlapping Patents

In the case of products that practice lots of patents, say a computer: each of the 100 patents used in a computer might get paid based on the sales of the product, 1/100 for each. Or, the formula could be weighted: the share of the take from the Pool could be percentage of total sales, weighted by the royalties received on each patent under the auction as a percentage of royalties received in the auction on the other 99 patents. If that were not acceptable, the Patent Office's economist might devise other apportionment systems in response to market inputs; and based on market statistics that would be developed and collected in the course of administering the Pool plan.

In principle, patents that no one wants to pay much royalty for, because they are only minor components, should be only weakly-weighted in calculating the take from the Pool. The marketplace should decide.

VII. Special Proceedings for Exceptional Pioneering Inventions

Inventors may be afforded a right to seek enhanced remuneration (more than the standard royalty) in proceedings before a Patent Office royalty board, or ultimately a court review, in case an inventor wishes to argue reasons for extra compensation being justified (that the invention is pioneering, life-saving, vital to national defense, or the like).[6] The standard payments to other inventors will be proportionately reduced to the extent any such enhanced claims succeed; so all other inventors should have standing to object to enhanced claims, if they wish to intervene.

In the case of pharmaceutical companies, it might at first seem like their compensation is going to be less than what a patent is worth to them under the current system. However, if they sell a lot of expensive drugs, their share of the total take could be considerable. But in any event, they too could make application for enhanced payments due to their drugs' demonstrable pioneering lifesaving qualities. On the other hand, in cases that do not meet that high standard, the Pool

6. Consider, for example, chemist Michael Polanyi's suggestion for a tribunal of experts to award royalties to inventors. Adrian Johns, *Piracy: The Intellectual Property Wars from Gutenberg to Gates*, The University of Chicago Press (2009), p. 419.

system may cut back on instances of drug patents on trivial variations obtained just to extend the monopoly term; as well as sweetheart reverse payment deals to generic challengers and the like; that now drive up healthcare costs.

VIII. The Pool Plan is Distinguishable from Compulsory Licensing Regimes

The described Public Patent Pool system avoids a known disadvantage of a compulsory licensing system in that it is possible to bid for and obtain an exclusive license—so the winning bidder who obtains an exclusive license is not discouraged from investing to promote the invention by the possibility of free-riders. In contrast, a system of compulsory licensing available to all interested users, permits free-riders and so discourages any one trader's incentive to invest in promoting the invention.

IX. Advantages of The Pool Plan

The Pool offers the advantage that a patentee cannot so easily hold up progress of an entire industry; in particular, it mitigates the problem of strike suits by "trolls" because a potential troll has to put his/her own cash on the line in the public bid system, in order to obtain an exclusive license to even his/her own alleged invention.

The Pool would help all inventors, and particularly small inventors, to find a market for their patented inventions. At present, after the Patent Office issues a patent the inventor is completely on his/her own as far as figuring out how to work the invention on an economic basis; as a result, inventors may easily fall victim to fraudulent schemes by invention promoters.

Skill at inventing is very different from skill at marketing and not often found in the same person or perhaps even enterprise, so it is economically efficient to separate the two by the public patent pool system (specialized division of labor). Inventors who are klutzes at marketing but insist on a supposed divinely-conferred "natural right" to exclusive use of their inventions, may act like loose cannons creating a hazard to technological progress. It is an acknowledged fact that the skill set of an inventor, is hardly the same as that of an effective product marketer.[7] By separating the invention reward system from the public bid system for the exploitation of patented inventions, the Pool system benefits from the division of labor between inventors and marketers, giving each freedom to operate in his/her own proper sphere to the best of his/her abilities.

Slowing progress is not the prerogative of inventors with poor marketing skills or resources. It happens with equally if not greater disruptive results at the hands of savvy marketers in dominant positions exploiting protracted patent litigation to chill competitive market entry or discourage potential customers from purchasing defendant's competitive technology.[8] By neutralizing the leverage of dominant positions in acquiring and enforcing patents, the Pool system would help protect technological advancement from the harm of widespread anti-competive misuse of patents.

X. The Pool Plan Should be Compulsory, Not Opt-in or Opt-out

The Pool needs to be compulsory, just like the need for mandatory health insurance. An opt-in system would leave manipulators free to keep doing what they are doing, that now causes so many complaints about the patent system. The only exception might be an initial voluntary trial period to help fine-tune the new system.

XI. Conclusion

Having operated under basically the same patent system since the time of the horse and buggy, it might now be time for a real change. Many commentators have suggested revision of our patent system to better protect inventors and industry, by eliminating inefficiencies in patent prosecution and litigation. As far as they go, they may have merit; but even more extensive modification seems desirable, for which purpose the Pool plan may be suited.

Should it show benefit in the patent arena, a similar Pool principle might be extended to copyrights. The copyright system is under substantial pressure from online abusers of recorded music, videos, books[9] and software. Revision of the copyright system to reduce the tension between the interests of creators and those of users, may be the prescription needed to earn both patent law and copyright law greater respect. ■

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7. W.J. Holstein, "Can America's idea factories save the day?," *CEO Magazine* (May/June 2010), p. 58.

8. See, e.g., *Mitsubishi Heavy Industries, Ltd. v. General Electric Co.,* Complaint, U.S. District Court, Western District of Arkansas, Civil Action No. 10-5087, p. 16 ("GE's assertion in the United States of just one patent-the '039 patent-has slowed the development of wind turbines in the United States as compared to the European Union, where GE was forced to withdraw the counterpart patent").

9. R. M. Kunstadt, "Google Book Settlement," 22 *IP & Tech Law J* 26 (Feb 2010); "Too Big To Infringe," *National Law Journal*, May 4, 2009, p. 23.