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THE DIVISION OF RIGHTS AMONG JOINT INVENTORS: PUBLIC POLICY CONCERNS AFTER ETHICON V. U.S. SURGICAL *

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I. Introduction

"[T]he Constitution recognizes an original, preexisting, inherent right of property in the invention and authorizes Congress to secure to inventors the enjoyment of that right. But the right existed before the Constitution and above the Constitution, and is, as a natural right, more clear than that which a man can assert in almost any other kind of property." - Daniel Webster

Few things could be more important to the theory and practice of patent law than the establishment of firm principles governing the scope of a patent owner's property rights and the legal procedures necessary to enforce those rights. Yet, surprisingly, there appears to be a growing controversy regarding the exact nature of these rights, specifically among joint inventors. Even more surprising, the Court of Appeals for the Federal Circuit, an institution created to harmonize patent law princi-

[*252] ples, n1 recently rendered a split decision in *Ethicon v. U.S. Surgical*, n2 a case involving questions of property rights and enforcement rights litigated among joint inventors in the wake of the 1984 amendment to *35 U.S.C. Section 116*.

This article analyzes the Federal Circuit's decision in *Ethicon* and discusses several public policy and equity concerns raised by the court's ruling. In addition, the article will briefly explore some procedural changes that might be implemented to address these concerns and alleviate the unnecessary hardships that *Ethicon* may inflict on certain joint inventors.

II. Overview

A. The 1984 Amendment

The 1984 amendment to 35 U.S.C.

116 ("the 1984 amendment") broadened the eligibility for joint inventorship to include any person who makes an inventive contribution to a least one claim of the patent. n3 The clear legislative intent behind this amendment, as well as related changes to *35 U.S.C. § 103*, was to facilitate easy delineation of inventorship with respect to "team research" within corporate research and development departments and large academic institutions. n4 Prior to this amendment, corporations and universities often experienced difficulties in securing patents for "team" inventions because no single researcher on the team could show inventorship of every claim of the patent sufficient enough to warrant being named as an inventor. n5 As a

[*253] result, it was sometimes necessary to file multiple patent applications, all directed toward the same basic invention, in order to circumvent various inventorship problems arising under the old § 116.

Of course, the 1984 amendment was not the first legislative attempt to relax the standards for joint inventorship. In 1967, a patent reform bill introduced in both the House and Senate included a proposal to amend § 116 to allow individuals who contributed to some but not all the claims of a patent to be named as joint inventors. n6 However, the 1967 reform bill was never enacted, and, significantly, the proposal to amend § 116 was omitted from the next major patent reform bill that emerged in 1976.

Three objections were raised in 1976 against the § 116 amendment liberalizing joint inventorship. Opponents claimed that the amendment would "(1) lower the standard of invention; (2) confuse the prosecution of the application and litigation of the patent; and (3) create a bias against individual inventors." n7

However, the § 116 proposal then reappeared as part of the 1984 amendment, and was enacted with comparatively little debate over what effect the resulting liberalized inventorship rules might have on the property rights of independent joint inventors and patent co-owners. One question that might reasonably be asked, therefore, is how a proposal that seemingly had been rejected by the legislature only eight years earlier, on the basis of serious potential problems that it might cause, could pass in 1984 without sparking much strong opposition? Surely it was evident in 1984 that the amendment to § 116, absent a special provision to cover patents not jointly assigned to a single ownership entity, might have an adverse effect on the property rights of those inventors operating outside the paradigm of the corporate/academic "research team."

One answer may lie in the fact that, throughout the 1984 congressional debates, the patent reform bill was innocuously referred to as a "housekeeping bill," n8 which may have partially masked what was really a significant shift in the law of inventorship toward the notion of the "corporate patent" based upon the "research team" concept, and a concomitant change in the allocation of property rights among joint

[*254] inventors. Second, the 1984 amendment was apparently shaped by recommendations from an ad hoc committee representing major corporations, research-oriented industries, and academic institutions, n9 without significant evidence of input by, or on behalf of, independent inventors. n10

B. Ethicon v. U.S. Surgical

In Ethicon v. U.S. Surgical, n11 Ethicon attempted to enjoin the defendant, U.S. Surgical, from manufacturing or selling a surgical device known as a "safety trocar," which allegedly infringed two claims of an Ethicon patent (U.S. Patent 4,535,773) disclosing a similar device and naming Dr. Yoon as the sole inventor. n12 Ethicon also sought to collect damages for past infringement. n13 While the suit was pending in district court, however, the defendant became aware of Mr. Choi, an electronics technician who claimed to have collaborated with Dr. Yoon on the safety trocar project, but was nevertheless unnamed as a co-inventor on the '773 application. n14 U.S. Surgical immediately purchased from Mr. Choi a license (purporting to operate retroactively) to manufacture the claimed invention, together with an agreement from Mr. Choi to assist in any legal proceedings relating to the '773 patent. n15 U.S. Surgical then moved

[*255] to correct inventorship of the Ethicon patent by adding Mr. Choi as a co-inventor under 35 U.S.C. § 256 n16 and moved to have the infringement complaint dismissed. n17

The district court found that Mr. Choi had, indeed, contributed to two of the fifty-five claims of the '773 patent (although not the same two that Ethicon claimed were infringed) n18 and ordered that he be added to the patent as a named inventor. n19 The court also granted the defendant's motion to dismiss on the grounds that Mr. Choi, having now been deemed a necessary plaintiff in any infringement suit, was unwilling to consent to the suit against U.S. Surgical. n20 The district court found no fault with Mr. Choi's granting a "retroactive" license to U.S. Surgical n21 and therefore refused to grant relief to Ethicon for alleged past infringement by U.S. Surgical. n22

The Federal Circuit, over a sharp dissent by Judge Newman, upheld the district court's ruling, conceding that a joint inventor, even one who was a relatively minor contributor to the overall invention, could effectively prevent another joint inventor from enforcing the patent against an alleged infringer. n23 Although the majority acknowledged that a joint owner cannot technically grant a release from past infringement in the form of a retroactive license to an accused infringer, the court reasoned that a joint owner may effectively do so, simply by refusing to join his or her fellow co-owner(s) as a plaintiff in the infringement suit. n24 Even though the latter course of action is not taken retroactively, it effectively blocks retrospective relief.

In her dissent, Judge Newman argued that the 1984 amendment seriously altered the previously established scheme of property rights with

[*256] respect to joint inventorship. n25 The clearly-established rule existing prior to the 1984 amendment was that joint inventors shared an equal and undivided interest in their patent. n26 However, Judge Newman argued that this rule was based on an "all claims" doctrine of joint inventorship that has since been repudiated by the 1984 amendment. n27 Under the new law governing joint inventorship, she opined, a property rule that grants equal and undivided interests to joint inventors, regardless of their respective inventive contributions to the individual claims of the patent, is both illogical and inequitable. n28

III. Analysis of the Ethicon Opinion

There can be little doubt that the majority's opinion correctly restates the federal patent law as it exists today. Because the law prior to 1984 created equal and undivided interests among joint inventors, and because Congress was entirely silent on this issue during its proceedings, n29 the unavoidable legal conclusion must be that Congress did not intend to change the preexisting property scheme by means of the 1984 amendment. Since there was no change in the existing property scheme discernible from the 1984 legislative history, Dr. Yoon and Mr. Choi shared equal and undivided interests in the '773 patent in accordance with the pre- 1984 property rights scheme. Therefore, according to pre-1984 case law, each was "at the mercy" of the other with respect to enforcing that patent. n30 Accordingly, it was jurisprudentially sound for the majority to conclude that Mr. Choi could effectively nullify Dr Yoon's infringement suit by refusing to join as a plaintiff.

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Unfortunately, the majority's opinion does not appear to address several valid concerns raised in Judge Newman's dissent. Two questions, in particular, remain unanswered in the wake of the Ethicon decision. First, is it equitable to apply the property rules that were applicable to patent ownership prior to the 1984 amendment in light of the new law's liberalization of eligibility for joint inventorship? Second, is a policy allowing one joint inventor to obviate the patent enforcement efforts of another, even in the face of past infringement, justifiable in light of the 1984 amendment, which significantly lowered the hurdle for joint inventorship?

A. Equity of the Pre-1984 Amendment Property Scheme

In her dissent, Judge Newman asserted that prior to 1984, "precedent did not permit naming as an inventor a person who did not share in the conception of the invention and who did not contribute to all of the claims of the patent." n31 There is some question, however, as to whether this statement is entirely accurate. While the so-called "all claims" rule was consonant with existing Patent Office regulations, had a long history in patent case law, n32 and was certainly the law of the land in some jurisdictions prior to the 1984 amendment, n33 it had, in fact, been criticized and/or inconsistently enforced in other jurisdictions prior to 1984. n34

Even if the all claims rule was never universally accepted as law, there seems to be some historical merit to Judge Newman's premise that prior to 1984, "a legally cognizable 'joint invention' required . . . a real

[*258] partnership in the creation and development of the invention." n35 Regardless of the extent to which this theory was accepted prior to 1984, it at least provided a logical basis of foundational support for the preexisting property rule granting equal and undivided interests to joint inventors. If joint inventors were members of a "partnership," whereby they expended relatively equal amounts of inventive effort and shared a stake in the success or failure of their project, then a rule providing equal interests in any resulting patent seemed entirely equitable. Further, a rule allowing each owner to foreclose the enforcement efforts of the other was not inconsistent with a "shared-effort" scheme. While in practice such "equal-stake" partnerships may have been the exception rather than the rule, the theory, at least, was logically consistent with the division of rights created by the preexisting property scheme.

With the enactment of the 1984 amendment, however, the all claims rule was effectively overruled by statute, n36 and thus, the "partnership" theory of joint inventorship was completely eviscerated. Clearly the equal-interest property rule, as applied to patent ownership rights, can no longer be supported by the theoretical assumption that joint inventors expend roughly equal effort in obtaining the patent and, therefore, are entitled to equal interests in the patent.

The fact that the pre-1984 property rule, as applied to patent ownership rights arising from inventorship, now appears to be untethered to any theoretical justification clearly worried Judge Newman. Unfortunately, the majority in *Ethicon* did not attempt to alleviate this concern by offering any new justification for the continued application of the equal-interest property rule. Instead, the majority simply pointed out that joint inventorship is a voluntary relationship and, therefore, any inequities resulting from the application of the equal-interest property rule must either be accepted by the inventors voluntarily, or be dealt with by express agreement among the parties claiming an ownership interest. n37

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This reasoning may be unsatisfactory to those who view the law optimally as *deus ex machina*, a mechanism that, once set in motion, administers equitable results without the need for human interaction. However, from a pragmatic standpoint, the majority's opinion does, at least, offer a practical solution to the problem of allocating patent ownership rights among joint inventors. n38 In contrast, Judge Newman's dissent, while correctly pointing out the potential inequality of an equal-interest property scheme after the 1984 amendment, fails to suggest an alternate property scheme, or how such a scheme would work in a real-world application. Presumably, such an alternate system would require each individual claim of a patent to be treated as a separate property interest, with ownership apportioned according to who made an "inventive contribution" to each claim. The practical application of such an alternate system appears unduly burdensome on its face, and would likely require major changes in the way patents are currently documented and enforced. n39 Perhaps in light of this concern, the majority chose to maintain the equal-interest property scheme, inequitable as it may be, with the feasible justification that the "voluntariness principle" will alleviate some of its potential unfairness.

The patent practitioner should note, however, that the majority's decision places a heavy burden on patent counsel to advise clients of the potential pitfalls created by joint inventorship in light of the *Ethicon* decision, and how best to avoid or alleviate the risk of an inventor being trapped by these pitfalls. It should also be noted that the *Ethicon* rule imposes a particular disadvantage upon small, individual inventors who may not have access to patent counsel during the inventive process when the critical decision whether or not to collaborate with others must necessarily be made. A seemingly innocent request for the pro forma assistance of a technician or a graduate student may result in a co-inventorship issue and the corresponding risk of losing a portion of one's patent ownership rights.

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B. Public Policy Analysis of the Voluntary Consent Rule

35 *U.S.C.* § 252 allows joint owners of a patent to make or have made, use, offer to sell, or sell the patented invention without the consent of the other co- owners. As the majority in *Ethicon* noted, "the congressional policy expressed by § 262 is that patent co- owners are 'at the mercy of each other.'" n40 It might seem logical, therefore, to assume that the rule for enforcing one's patent rights would parallel the rule for exploiting those rights, thereby enabling any co- owner of a patent to sue for infringement without the consent of the other owners. n41 However, the law has not evolved in this manner.

For better or for worse, in order to bring or sustain an infringement suit against a third party, a joint owner typically must be joined voluntarily by all other owners of the patent. n42 There are three classic public policy reasons for this seemingly inconsistent rule.

First, there is a public interest in ensuring that each interested party to a patent infringement suit has an opportunity to protect his other substantive rights. This, at first, seems to be a plausible rationale since patent infringement suits typically pose a risk of the plaintiff's patent rights being lost due to a ruling of invalidity or unenforceability. n43 Therefore, the initiation of a patent infringement suit by one co-owner necessarily puts at risk the patent rights of all co-owners. However, when one considers that each joint owner already has the ability to unilaterally prejudice the pecuniary interests of other owners (by granting free licenses, for instance), this reason seems somewhat less persuasive. In

[*261] other words, if patent co-owners are "at the mercy of each other" with respect to unilateral licensing activities, why shouldn't they also be at the mercy of each other with respect to unilateral enforcement actions?

Second, there is a public interest in protecting defendants from having to litigate multiple suits, simultaneously or sequentially, concerning infringement of a single patent. While this also seems to be a valid policy goal, it is unclear why patent co-owners must voluntarily consent to join as plaintiffs in an infringement suit when this goal is equally achievable by allowing non-consenting co-owners to be joined as involuntary plaintiffs (or defendants) under the Federal Rules of Civil Procedure ("FRCP"). n44

Third, there is a public interest in protecting "the interest of a co-owner in being able to license to third parties under his or her patent without harassing suits by other co-owners." n45 While this is certainly a laudable goal, it is questionable whether it necessarily dictates adherence to the voluntary consent rule. A truly harassing suit by one co-owner against the licensee of another co-owner could easily be quelled before trial, for instance, by simply producing a copy of the valid license agreement. Furthermore, the FRCP already provide stiff sanctions to discourage harassing lawsuits. n46 Upon closer inspection, therefore, it seems that the freedom-from-harassment explanation has less to do with the substantive rights of parties and more to do with judicial efficiency. The real thrust of this policy seems to be that, when a plaintiff cannot join all the co-owners of the patent, the court will simply assume, for the sake of judicial efficiency, that some volitional reason exists as to why the other co-owners are unwilling to join the suit. For instance, one of the holdouts may have licensed the patent to the alleged infringer, or may have simply consented to the infringer's use of the patent. n47 As

[*262] another example, some co-owners may have reservations regarding the validity of the infringement suit and/or the enforceability of their patent and, therefore, do not wish to join the suit. In a sense, this policy encourages co-owners to work out their own internal disputes before continuing a claim against a third party.

The problem with this policy is that while it may be logical in cases where the plaintiff seeks merely to enjoin future infringing activity, it is clearly unreasonable in cases where the plaintiff also seeks damages for past infringement. The reason for this difference is that past infringement is a factual question which, if proven, results in measurable damages independent of any hypothetical actions of other co-owners. To bar a patent co-owner from bringing suit against an alleged past infringer, solely because one of his or her fellow co-owners refuses to join the suit at a later time, seems to deprive the interested co-owner of a legitimate and adjudicable cause of action.

Prior to the 1984 amendment, this trade-off between judicial efficiency and the substantive rights of patent co-owners may have been justifiable, at least with respect to joint inventors who maintained their respective ownership interests, n48 under the partnership theory of joint inventorship. Since, at that time, joint inventors were presumed to have made roughly equal contributions of inventive effort to the patented invention, it was reasonable to assume that they also had roughly equal interests in the disposition of their patent rights. In other words, the amount of money each was willing to accept to license or sell his or her individual patent rights, and the effort each was willing to expend to protect and defend those rights, were assumed to be roughly equal.

On this basis, a reasonable inference could be drawn that when a potential plaintiff failed to obtain the consent of the other patent co-owners, either the case was too weak to justify the expense of litigation or one or more of the joint owners had already settled with the accused infringer, presumably for an amount comparable to what could have been obtained at trial. In either situation, judicial efficiency was achieved prior to the 1984 amendment because the roughly equal interest of each patent

[*263] co-owner served as a check and balance against the ability of other co-owners to bring or dispose of a case against an infringer. These vested interests were also likely to preclude the defendant from escaping liability by settling for mere "pennies on the dollar." n49 Each patent co-owner's stake was simply too high.

In the wake of the 1984 amendment, however, the presumption that co-inventors (who maintain their ownership rights) have roughly equal interests in the disposition of their patent rights is no longer valid. As the Ethicon case illustrates, co-inventors who invest disproportionate inventive effort, in the form of time, money and research, will consequently have different levels of interest in protecting and defending their patent rights. For instance, a co-inventor who sinks three years of research and a million dollars of capital into an invention will typically be much more willing to litigate a costly infringement suit than another co-inventor who spent just one weekend developing a relatively minor element of the invention. Under the rule of Ethicon (applying an equal-interest property rule to non-equal-stake co-inventor relationships), both co-inventors will own an equal share of the patent. However, these interests will actually be in sharp conflict with each other because of the wide disparity in each co-inventor's level of contribution.

C. Possible Procedural Changes

The potential conflict of interest among joint inventors, described above, leads to the conclusion that the rule existing prior to the 1984 amendment (requiring voluntary consent of all patent co-owners in an infringement suit) is no longer applicable in the wake of the 1984 amendment. A more equitable rule, and the one proposed by Judge Newman in her dissent, would allow non-consenting parties to be joined as involuntary plaintiffs under Rule 19(a) of the FRCP.

This suggestion regarding the involuntary joinder of plaintiffs in patent infringement suits has been made before. For example, Wright et al. have long suggested that

there seems to be no good reason, other than some abstract notion of doctrinal purity for not extending the involuntary plaintiff rule to cover co-owners of a patent Inasmuch as the rule relating to co-owners occasionally prevents

[*264] one co-owner from securing relief, its continued application cannot be justified.
n50

This occasional injustice does not occur in the patent licensor/licensee relationship. Indeed, it is an odd result that under the rule of *Independent Wireless Telephone Co. v. Radio Corp. of America*, n51 which was explicitly incorporated into Rule 19(a) of the FRCP in 1937, exclusive licensees seem to have more protection against infringement by third parties than do co-owners of a patent. In fact, as Wright et al. point out, even joint applicants for a patent appear to have more procedural autonomy than do joint owners.
n52

The historical justification for not invoking involuntary joinder among patent co-owners is that such joinder is premised on an implied obligation arising from a trust relationship among the parties that, as a matter of law, does not exist among co-owners. n53 Whereas a patent owner who licenses his invention to another party is said to "hold the title to the patent in trust for such a licensee, to the extent that he must allow the use of his name as plaintiff," n54 patent co- owners are not deemed to hold any such duty of trust towards each other. n55

As the preceding discussion on the voluntary consent rule has established, however, and as the result in *Ethicon* clearly illustrates, the fact that patent co- owners owe no special duty of trust to one another is simply not a useful distinction upon which to base an otherwise inequitable rule. Indeed, it is precisely the fact that co-owners have no duty of trust towards each other, coupled with the fact that their respective investments may be greatly disproportionate, that supports the conclusion that the involuntary joinder technique of Rule 19(a) should be equally available to patent co-owners and exclusive licensees alike.

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At a minimum, though, co-owners should not be allowed to effectively grant ex post facto releases to accused infringers (by agreeing to assist the infringer in any future litigation actions brought by the other co-owners), once either party to the prospective litigation has notice of possible infringement. To hold otherwise systematically prejudices the interests of major investors of inventive effort in favor of minor investors. In addition, it creates an incentive for infringers to shop for "latent" co-inventors, such as Mr. Choi, who are willing to act as "road-blocks" to preclude enforcement by other co-owners against identified infringers. This has the net effect of lowering the cost of patent infringement by decreasing the likelihood that infringers will be successfully sued, a policy that should never be endorsed by the court because patent protection is only achievable to the extent that infringement remains a much more costly option than purchasing a patent license.

In ruling that Mr. Choi's license to U.S. Surgical is tantamount to a release, based upon his written refusal to consent to suit, the Federal Circuit in *Ethicon* seems to have engaged in a type of legal formalism that has long been discouraged by the drafters of the FRCP. n56 If the general rule is that co-owners cannot grant releases, as the majority readily acknowledged, n57 then the court should look past the formalistic requirements of joinder to "determine whether in equity and good conscience the action should proceed among the parties before it, or should be dismissed" n58 By focusing on a variety of equitable considerations the court could have ruled, for instance, that mandatory joinder of Mr. Choi was proper under Rule 19(a) in light of: 1) Ethicon's good faith allegations of past patent infringement by U.S. Surgical; 2) the fact that Mr. Choi contributed to only two of the fifty-five claims of the '377 patent; and 3) that Dr. Yoon did not originally believe that Mr. Choi was a joint inventor and, therefore, had no opportunity to enter into a contractual agreement regarding enforcement rights.

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IV. Conclusion and Outlook

It may seem odd that, fifteen years after the enactment of the 1984 amendment, the Federal Circuit is just now dealing with a case of first impression involving the scope of property rights in the era of liberalized joint inventorship. This can readily be explained, however, by the fact that most multiple-inventor patents, at least those valuable enough to be litigated, arise through work within commercial or university research organizations, and are assigned ab initio to a single ownership entity. n59 Indeed, this type of team research effort was specifically envisioned by the drafters of the 1984 amendment.

Ethicon is an important case because it forced the Federal Circuit to consider some key questions regarding property rights and public policy that have essentially lain dormant since the enactment of the 1984 amendment. The sharp split of opinion in reaching the Ethicon decision shows that a seemingly fundamental principle of law can often crumble under its own weight when the theoretical underpinnings that once provided its logical justification are removed, leaving behind a vestigial principle of law devoid of doctrinal support.

In Ethicon, the court's decision, while jurisprudentially correct, risks causing potential inequities among disproportionately vested joint inventors as well as a general erosion of the social policy against patent infringement. In light of these weaknesses, together with the fact that the Federal Circuit split sharply on these very important issues, we believe that additional action is needed to more fully delineate and resolve these issues. Alternatives for such action include legislative clarification of the patent property rights vision in light of the 1984 amendment, en banc consideration by the Federal Circuit, or even Supreme Court review. In the absence of such corrective action, we believe that the Ethicon decision will spur defendants in patent litigations to search in earnest for latent co-inventors who can absolve the defendants of their sins - past, present and future.

n1 See New Patent Court: A Good Idea, 1 Nat'l. L. J. at 15 (Dec. 10, 1979).

n2 *Ethicon, Inc. v. United States Surgical Corp.*, 135 F.3d 1456, 45 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 1998), cert. denied 1195 S. Ct. 298 (1998). But see *id.* at 1472, 45 U.S.P.Q.2d at 1564 (Newman, J., dissenting) (arguing that the "voluntary joinder" rule is incompatible with and unnecessary under Fed. R. Civ. P. 19).

n3 Patent Law Amendments of 1984, Pub. L. No. 98-622, sec. 104(a), (1984 U.S.C.C.A.N.) 98 Stat. 3383, 3383-84 (codified at 35 U.S.C. 116, P 1 (1994)) ("Inventors may apply for a patent jointly even though (1) they did not physically work together or at the same time, (2) each did not make the same type or amount of

contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.").

n4 See, e.g., President's Statement on Signing H.R. 6268 into Law, 20 Weekly Comp. Pres. Doc. 1818 (Nov. 9, 1984), (noting that the amendments bill "eliminates unwarranted technicalities in the patent law that threaten the validity of patents for inventions arising from corporate research teams").

n5 Hearings on H.R. 3285, H.R. 3286, and H.R. 3605 Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary, 98th Cong. 61 (1984) (statement of Mr. Donald Banner) ("It is often difficult or impossible to draft the claims of the patent so that each co-inventor has his contribution recited in each of the claims.").

n6 S. 1042, 90th Cong. (1967); H.R. 5924, 90th Cong. (1967).

n7 Letter from Walter D. Scott, Ass't Dir. for Econ. & Gov't, Office of Mgt. and Budget, to A.R. Whale, President, Am. Pat. Law Ass'n (Apr. 8, 1975), reprinted in Pat. Trademark & Copyright J. (BNA), Mar. 4, 1976, at 40.

n8 130 Cong. Rec. 28,074 (1984) (remarks of Rep. Kastenmeier).

n9 Hearings on S. 1535 and S. 1841 Before the Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary, 98th Cong. 143 (1984) (testimony of John E. Maurer on behalf of the Ad Hoc Committee to Improve the Patent Laws). Ironically, it was the independent inventors that apparently defeated the so-called "Year 2000 Legislation" embodied in the House Resolutions.

n10 W. Fritz Fasse, The Muddy Metaphysics of Joint Inventorship: Cleaning Up After the 1984 Amendments to 35 U.S.C. 116, 5 Harv. J. L. & Tech. 153, 175 n.126 (1992) ("Realizing that some of the proposed and enacted amendments to the patent statutes may affect the rights and power between employers and inventor-employees over their inventions, one may reasonably wonder why no Ad Hoc Committee represented the viewpoint of sole inventors or employed inventors.").

n11 *Ethicon, Inc. v. United States Surgical Corp.*, 921 F. Supp. 901 (D. Conn. 1995) (denying plaintiff's motion for a jury trial on defendant's infringement defense of inequitable conduct), 937 F. Supp. 1015 (D. Conn. 1996) (granting motion to correct patent by adding coinventor), 954 F. Supp. 51 (D. Conn. 1997) (dismissing the complaint, on motion of coinventor/intervenor), aff'd, 135 F.3d 1456, 45 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 1998).

n12 937 F. Supp at 1019.

n13 Id.

n14 Id.

n15 U.S. Surgical agreed to pay Choi \$ 300,000 upon execution of the agreement and to make future payments of up to \$ 1 million contingent on the outcome of the litigation. Id. The terms of the license purported to make it retroactive in the sense that U.S. Surgical was relieved of any liability stemming from past infringement of the '773 patent. Id.

n16 Id.

n17 *Ethicon*, 954 F. Supp. at 52.

n18 *Ethicon*, 937 F. Supp. at 1036.

n19 Id. at 1038.

n20 *Ethicon*, 954 F. Supp. at 53.

n21 Id. at 52.

n22 Id. at 53.

n23 *Ethicon*, 135 F.3d at 1468, 45 U.S.P.Q.2d at 1554.

n24 Id. ("[I]n this case, the result is effectively no different than if Choi could grant a release to U.S. Surgical of any liability to Ethicon.").

n25 *Id. at 1471*, 45 U.S.P.Q.2d at 1557, (Newman, J., dissenting) ("By amending 116 in order to remove an antiquated pitfall whereby patents were being unjustly invalidated, the legislators surely did not intend to create another inequity. Apparently no one foresaw that judges might routinely transfer pre-1984 ownership concepts into the changed inventorship law.").

n26 *Id. at 1469*, 45 U.S.P.Q.2d at 1555 (Newman, J., dissenting).

n27 Id.

n28 Judge Newman did not, however, fully delineate the parameters of a more logical or equitable solution to this dilemma.

n29 The absence of any significant debate over this issue is puzzling, and it is in stark contrast to the lively debate that ultimately defeated analogous (albeit more wide-ranging) proposals to re-visit the bases for entitlement in 1967 and 1976. See also Mary Helen Sears, *The Corporate Patent - Reform or Retrogression?*, 22 *Vill. L. Rev.* 1085, 1088-89, n.18 (1977).

n30 *Ethicon*, 135 F.3d at 1468, 45 U.S.P.Q.2d at 1554 (quoting *Willingham v. Lawton*, 555 F.2d 1340, 1344, 194 U.S.P.Q. (BNA) 249, 252 (6th Cir. 1977)).

n31 Id. at 1469, 45 U.S.P.Q.2d at 1555 (Newman, J., dissenting).

n32 *Stearns v. Barrett*, 22 F. Cas. 1175, 1181 (C.C.D. Mass. 1816) (No. 13,337) ("the natural meaning of the words [joint inventors] is, that the invention was the result of their joint, and not their several and independent labors"); *Stewart v. Tenk*, 32 F. 665, 666 (S.D. Ill. 1887) ("a joint patent can be sustained only for a joint invention"); *In re Hamilton*, 37 F.2d 758, 4 U.S.P.Q. (BNA) 224 (C.C.P.A. 1930).

n33 See, e.g., *In re Sarett*, 327 F.2d 1005, 140 U.S.P.Q. (BNA) 474 (C.C.P.A. 1964); *Rival Mfg. Co. v. Dazey Prods. Co.*, 358 F. Supp. 91, 177 U.S.P.Q. (BNA) 432 (W.D. Mo. 1973).

n34 See, e.g., *Vekamaf Holland B.V. v. Pepe Benders, Inc.*, 211 U.S.P.Q. (BNA) 955, 966-67 (D. Minn. 1981); *SAB Industri AB v. Bendix Corp.*, 199 U.S.P.Q. (BNA) 95 (E.D. Va. 1978); *Smithkline Diagnostics Inc. v. Helena Labs. Corp.*, 859 F.2d 878, 888, 8

U.S.P.Q.2d (BNA) 1468, 1477 (Fed. Cir. 1988) (acknowledging that "the 'all claims' rule was not uniformly accepted as 'the substantive law' before the 1984 Act").

n35 *Ethicon, 135 F.3d at 1470, 45 U.S.P.Q.2d at 1556* (Newman, J., dissenting). See also, 1 Donald S. CHISUM, CHISUM ON PATENTS 2.02[2], at 2-5 n.2 (rel. no. 22, May 1987) ("Only where the same single, unitary idea of means is the product of two or more minds, working *pari passu*, and in communication with each other, is the conception truly joint and the result a joint invention.") (quoting 1 WILLIAM C. ROBINSON, THE LAW OF PATENTS FOR USEFUL INVENTIONS 396 (1890)).

n36 It is widely agreed that this was the purpose of the 1984 amendment to 116. See also Fasse, *supra* note 10, at 178 ("the main focus of attention in the amendment to section 116 was the abandonment of the 'all claims' rule").

n37 *Ethicon, 135 F.3d at 1466, 45 U.S.P.Q.2d at 1552* ("where inventors choose to cooperate in the inventive process, their joint inventions may become joint property without some express agreement to the contrary"). Note, however, that Dr. Yoon ostensibly did not believe that he was entering into a joint inventorship relationship with Mr. Choi; therefore, he would have had no reason to think that an express agreement was necessary.

n38 Note, however, that this solution imposes a particular hardship upon those inventors, such as Dr. Yoon, who are later "surprised" by joint inventors whom they had previously believed did not qualify as such. Such "surprise" inventors deprive the original named inventor of the opportunity to strike an express agreement regarding the apportionment of property rights in the patent.

n39 Under such an alternate system, changes would be necessitated in the patent application process to ensure that the inventorship of each claim was properly annotated. Changes in patent litigation would also ensue. For instance, damages for patent infringement would have to be apportioned among co-owners based upon an analysis of whether each claim was co-owned and individually infringed.

n40 *Ethicon, 135 F.3d at 1468, 45 U.S.P.Q.2d at 1554* (quoting *Willingham v. Lawton, 555 F.2d 1340, 1344, 194 U.S.P.Q. (BNA) 249, 252 (6th Cir. 1977)*).

n41 See also *American Optical Co. v. Curtiss, 59 F.R.D. 644, 649-50, 177 U.S.P.Q. (BNA) 726, 730 (S.D.N.Y. 1973)* ("At first blush, because of [the] rather substantial and absolute rights given a co-owner of a patent, it would seem that a court could adjudicate the rights of some of the co-owners without affecting the other co-owner's rights.").

n42 *Ethicon, 135 F.3d at 1468, 45 U.S.P.Q.2d at 1554* ("as a matter of substantive law, all co-owners must ordinarily consent to join as plaintiffs in an infringement suit"); see also *Waterman v. MacKenzie, 138 U.S. 252 (1891)*; *Gibbs v. Emerson Elec. Mfg. Co., 29 F. Supp. 810, 812, 43 U.S.P.Q. (BNA) 76, 77 (W.D. Mo. 1939)* ("one joint owner or co-owner or tenant in common of a patent right cannot compel the other co-owner to join in a suit for an infringement and neither can he make him a party defendant"); *Cilco, Inc. v. Precision-Cosmet, Inc., 624 F. Supp. 49, 227 U.S.P.Q. (BNA) 405 (D. Minn. 1985)*.

n43 *Willingham, 555 F.2d at 1344-45, 194 U.S.P.Q. (BNA) at 253*. ("While a finding of invalidity or non-infringement is not necessarily binding on an absent owner . . . there

is a possibility that the absent owner might be . . . estopped under traditional principles of res judicata or collateral estoppel.").

n44 Fed. R. Civ. P. 19(a) ("If the person should join as a plaintiff but refuses to do so, the person may be made a defendant, or, in a proper case, an involuntary plaintiff.") Exactly what constitutes a "proper case" was elucidated in the Committee Note of 1937 to Rule 19 reprinted in 4 James Wm. Moore et al., Moore's Federal Practice 19App.01, at 19App.-2 (rel. no. 113, Mar. 1997). ("For [an] example of a proper case for [an] involuntary plaintiff, see *Independent Wireless Telephone Co. v. Radio Corp. of America*, 269 U.S. 459 (1926)."). In *Independent Wireless*, the Supreme Court ruled that a patent owner who refused to join as co-plaintiff with his exclusive licensee could be made an involuntary plaintiff only if he was outside the jurisdiction of the court. *Id.* at 472. Otherwise, he must be made a defendant under Rule 19(a).

n45 *Willingham*, 555 F.2d at 1344-45, 194 U.S.P.Q. at 253.

n46 Fed. R. Civ. P. 11(c).

n47 8 Chisum, supra note 35, 21.03[3][d], at 21- 297 (rel. no. 48, Nov. 1993). ("[T]he courts [have] pinned the [voluntary consent] rule on the nature of joint ownership of a patent. Each such owner could grant licenses under the patent without the consent of the other. Hence, the refusal of a co- owner to join a suit against an infringer could be viewed as tacit consent to the infringer's activity.").

n48 This discussion focuses primarily on the ownership relationship between joint inventors who maintain their ownership rights or who transfer their respective "undivided" shares to different third parties, so that the original division of property rights among the joint inventors is "preserved" among the new third party owners. Note that where a single ownership entity assigns partial interest in a patent to a third party, especially where such interest is less than fifty percent, it can reasonably be assumed that the majority owner would insist on contractually reserving the unilateral right to sue.

n49 While a single co-owner may be willing to settle for less than the defendant would have paid in aggregate to all the owners of a patent, the settlement amount is likely to at least be within an order of magnitude of any potential jury award.

n50 7 Charles A. Wright et al., Federal Practice and Procedure 1606, at 82 (2d ed. 1986).

n51 269 U.S. 459 (1926).

n52 Wright et al., supra note 50, 1606, at 82 n. 23, citing *Paper Container Mfg. Co. v. Dixie Cup Co.*, 170 F.2d 333, 78 U.S.P.Q. (BNA) 344 (3d Cir. 1948); *Turchan v. Bailey Meter Co.*, 19 F.R.D. 201, 109 U.S.P.Q. (BNA) 473 (D. Del. 1956) (explaining that patent applicants can appeal an adverse Patent Office decision without the consent of other co-applicants).

n53 *Cilco, Inc. v. Copeland Intralenses, Inc.* 614 F. Supp. 431, 433, 227 U.S.P.Q. (BNA) 168, 170 (S.D.N.Y. 1985) ("a person may be joined as an involuntary plaintiff only where he has an obligation to participate in the suit . . .").

n54 *Independent Wireless*, 269 U.S. at 469.

n55 See, e.g. *Gibbs v. Emerson Elec. Mfg. Co.*, 29 F. Supp. 810, 43 U.S.P.Q. (BNA) 76 (W.D. Mo. 1939) (inasmuch as patent co-owners are at the mercy of each other, one owner may not join his co-owner as involuntary plaintiff, nor as defendant).

n56 7 Wright et al., supra note 50, 1614, at 204 ("The Advisory Committee's favorable citation, in its Note to the 1966 revision of Rule 19, of two patent cases that abandoned the formalistic approach . . . clearly indicate[s] that the formalistic approach no longer is proper.") (citing *A.L. Smith Iron Co. v. Dickenson*, 141 F.2d 3, 60 U.S.P.Q. (BNA) 475 (2d Cir. 1944) and *Caldwell Mfg. Co. v. Unique Balance Co.*, 18 F.R.D. 258, 108 U.S.P.Q. (BNA) 7 (S.D.N.Y. 1955)).

n57 *Ethicon, Inc. v. United States Surgical Corp.*, 135 F.3d 1456, 1467, 45 U.S.P.Q.2d (BNA) 1545, 1554 (Fed. Cir. 1998) ("the rights of a patent co-owner, absent agreement to the contrary, do not extend to granting a release that would defeat an action by other co-owners to recover damages for past infringement").

n58 Fed. R. Civ. P. 19(b) (emphasis added).

n59 Approximately seventy-six percent of all U.S. patents issued in 1996 were immediately assigned to a corporation or the U.S. Government. See U.S. Pat. & Trademark Off. Technology Assessment and Forecast Rep., (last modified June 30, 1997) <<http://www.uspto.gov>>. For an even higher estimate, see the remarks of Rep. Kastenmeier, who said that "[u]nder current patent practice, five-sixths of all patents vest - from the moment of issuance - in a corporate assignee," 130 Cong. Rec. 28,075 (1984).