

Joint Inventorship and Ownership in Student Team Projects#¹

Martin S. High

Oklahoma State University

Abstract

Students and faculty involved in entrepreneurial activities typically work in teams. This is, of course, a good thing as the team is typically greater than the sum of its parts, and we need to encourage students to work in teams to further their entrepreneurial goals. However, teamwork does present challenges when it comes to the legal interpretation of inventorship of any patentable inventions that result from the collaboration. The purpose of this paper is to clarify some of the issues that revolve around inventorship involving two or more inventors on a particular invention.

Introduction

Entrepreneurs working in a team environment are typically going to produce patentable inventions. After all, the goal of many entrepreneurial activities, particularly technical entrepreneurship, is to develop a business model that involves enforceable patent rights. University-based student entrepreneurs working in teams will likely have a similar goal of producing patentable inventions. We need to encourage students to work in teams to further their entrepreneurial goals, but appreciate that certain legal determination, such as inventorship and ownership, could drive the implementation of the patentable technology.

A product developed by teamwork does present challenges when it comes to the legal interpretation of inventorship of any patentable inventions that result from the collaboration. The purpose of this paper is to clarify some of the issues that revolve around inventorship involving two or more inventors on a particular invention. The paper will elaborate on what the legal principles are in inventorship, particularly joint inventorship, so that students and faculty participating in entrepreneurial activities can more knowledgeably manage joint inventorship issues.

It is important to understand what is involved in “inventorship” in general before focusing on joint inventorship. Inventorship is a legal determination that drives many ownership issues.¹ However, it is important to recognize that ownership and inventorship are two separate issues with separate factual inquiries.² Inventorship drives

Nothing in this manuscript should be construed as a legal opinion. This paper should serve only as a guide for faculty and students. However, just as each entrepreneurial activity is different in its focus, each activity will present unique legal challenges. Faculty and students should seek out qualified legal counsel to resolve issues early before they blossom into legal problems.

1. It is a bedrock tenet of patent law that “an invention presumptively belongs to its creator.” *Teets v. Chromalloy Gas Turbine Corp.*, 83 F.3d 403, 406 (Fed. Cir. 1996). Consistent with the presumption that the inventor owns his invention, the “[p]atent issuance creates a presumption that the named inventors are the true and only inventors.” *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998). When, as here, multiple inventors are listed on the face of the patent, each co-owner “presumptively owns a pro rata undivided interest in the entire patent, no matter what their respective contributions.” *Id.* This holding that “a joint inventor as to even one claim enjoys a presumption of ownership in the entire patent” flows from the language of 35 U.S.C. § 116, which permits joint inventors to “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.” *Isr. Bio-Engineering Project v. Amgen Inc.*, 475 F.3d 1256, 1264 (Fed. Cir. 2007).

2. Still, issues of patent ownership are distinct from questions of inventorship. See *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) (“It is elementary that inventorship and ownership are separate issues.”); see also *Jones v. Hardy*, 727 F.2d 1524, 1528 (Fed. Cir. 1984) (“each claim must be considered as defining a separate invention.”). We have held: “All that is required of a joint inventor is that he or she (1) contribute in some significant manner to the conception or reduction to practice of the invention, (2) make a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and (3) do more than merely explain to the real inventors well-known concepts and/or the current state of the art.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998) (citations omitted). *Isr. Bio-Engineering Project v. Amgen Inc.*, 475 F.3d 1256, 1264 (Fed. Cir. 2007).

ownership. Further, proper determination of inventorship is a critical legal determination. Without properly determining inventorship, issues may arise that may later result in any patent becoming invalid. Invalid patents routinely result in failed businesses and failed entrepreneurial ambitions. Also, not resolving inventorship at an early period may result in disputes among the inventors and in a dispute in the entrepreneurial activity.

Statutory Basis for Inventorship

The starting point for any inquiry into inventorship necessarily begins with the statute revolving around joint inventorship. In this paper, it is necessary to refer to statutes using standard legal citation.³ For instance, 35 USC § 116 refers to Title 35 of the United States Code, Section 116, the section of the patent laws dealing with inventorship. The text of 35 USC § 116 is as follows:

When an invention is made by two or more persons jointly, they shall apply for patent jointly and each make the required oath, except as otherwise provided in this title. 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. 35 U.S.C. § 116.

First, this section requires (i.e., “shall apply...”) that an application for patent be made jointly if the invention is made by two or more persons.⁴ Next, this section provides that two or more individuals are indeed joint inventors even if they did not work at the same physical location. So, for example, consider the scenario of a portion of a team of entrepreneurs working at one university and another part of the team working at a university across the country. If all members of the team are working on the same invention, and if each and every inventor has a particular claim that they can point to as their specific contribution, then each individual of the overall team is legally a joint inventor in this patent. In addition, 35 USC § 116 points out that not all inventors need make the same contribution. One inventor could make a majority of the inventive contributions to the patent and another inventor make only a small contribution and still be considered joint inventor. If the inventor making a small contribution can point to a piece of the invention that was his conception, then that inventor will be a joint inventor. Without an agreement to the contrary, an inventor who only made a small contribution will own an equal and undivided share in the entire patent with the inventor who made a large contribution.⁵ This is particularly important for faculty and students to recognize. There is an easy way to overcome this assumption and that is to have an agreement in place beforehand that shows that an inventor might own not invent a smaller share of a resulting patent.

Ownership Relative to Inventorship

The courts have repeatedly said that² inventorship initially drives the ownership of an invention. Ownership and inventorship are two separate patent topics that must be addressed separately; however inventorship is always the

3. The legal citation style used in this manuscript may be unfamiliar and even uncomfortable to some readers. Unfortunately, the Chicago Manual of Style does not provide guidance in the property citation of statutes and court cases other than that used in customary legal writing. See The University of Chicago Press, The Chicago Manual of Style, 12th ed. (1982), and <http://www.chicagomanualofstyle.org/home.html> (visited October 5, 2007). The citation style employed in this paper is used extensively in the legal profession and will allow the reader to quickly find the cases and statutes, including using non-legal search engines such as Google, cited in this paper in electronic databases if desired. Formatting citations in any other way would make it difficult or impossible to locate the cited materials.

4. When two or more persons jointly invent, they must jointly apply for a patent. 35 U.S.C. § 116 (2000). Co-inventors must so apply “even though . . . they did not physically work together or at the same time, . . . each did not make the same type or amount of contribution, or . . . each did not make a contribution to the subject matter of every claim of the patent.” *Id.* § 116. Because conception is the touchstone of inventorship, each “joint inventor must contribute in some significant manner to the conception of the invention.” *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1473 (Fed. Cir. 1997); see also *Ethicon*, 135 F.3d at 1460. “Conception is the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.” *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986) (internal quotation marks omitted). “An inventor may solicit the assistance of others when perfecting the invention without ‘losing’ any patent rights.” *Trovan, Ltd. v. Sokymat SA*, 299 F.3d 1292, 1302 (Fed. Cir. 2002).

5. This interplay between inventorship and ownership creates the anomalous situation that a co-inventor of even a single claim can then assert a right of joint ownership over an entire patent with multiple claims. See *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1473 (Fed. Cir. 1997) (citations omitted) (“One need not alone conceive of the entire invention, for this would obviate the concept of joint inventor-

first inquiry to be made. Ownership and patent and inventorship are separate questions and all that is required of a joint inventor is that the inventor contributes in some significant manner to the conception or the reduction of practice to the invention. This is stated most clearly in the case *Pannu v. Lolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998):

Still, issues of patent ownership are distinct from questions of inventorship. See *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1248 (Fed. Cir. 1993) (“It is elementary that inventorship and ownership are separate issues.”); see also *Jones v. Hardy*, 727 F.2d 1524, 1528 (Fed. Cir. 1984) (“each claim must be considered as defining a separate invention.”). We have held: “All that is required of a joint inventor is that he or she (1) contribute in some significant manner to the conception or reduction to practice of the invention, (2) make a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and (3) do more than merely explain to the real inventors well-known concepts and/or the current state of the art.” *Pannu v. Lolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998).⁶

The courts have recognized that inventorship and ownership create a unique situation for co-inventors that only invent a small portion of an invention. If that inventor invents or conceives of just a small part that results in one small claim, that inventor is co-owner in the entire patent absent any other agreement.

Joint Inventorship

Turning now to joint inventors, when there are one or more inventors to an invention in the application for patent, both inventors must jointly apply for the patent or the patent may be found later to be invalid. This also is clear from 35 USC § 116. Since conception is the key to inventorship, it is important to understand what the definition of conception is. Courts have ruled that conception is the formation in the mind of the inventor. See *Harbor Tech v. Monoclonal Antibodies Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986). An inventor conceives

ship.”); see also *Ethicon*, 135 F.3d at 1460 (“This rule presents the prospect that a co-inventor of only one claim might gain entitlement to ownership of a patent with dozens of claims.”). *Isr. Bio-Engineering Project v. Amgen Inc.*, 475 F.3d 1256 (Fed. Cir. 2007)

Gemstar-TV Guide Int'l, Inc. v. ITC, 383 F.3d 1352 (Fed. Cir. 2004)

6. Again, in this paper standard legal citation is used, including citations for court cases. In the court case cited above, “*Pannu v. Lolab Corp.*” is the title or style of the case, “155” is the volume of the Federal Reporter 3rd Series (“F.3d”), beginning at page 1344 with a specific reference to page 1351 in this citation. The citation also provides that the case was decided in the Federal Circuit Court of Appeals.

7. Because co-inventors need not contribute to the subject matter of every claim of the patent, inventorship is determined on a claim-by-claim basis. *Id.* Moreover, the inventorship analysis, like an infringement or invalidity analysis, first requires the construction of each disputed claim to determine the subject matter encompassed thereby. *Id.* The second step is a comparison of the alleged contributions of each asserted co-inventor with the subject matter of the correctly construed claim to determine whether the correct inventors were named.

Id.; *Ethicon*, 135 F.3d at 1460-61.

8. Alleged co-inventors must establish their co-inventorship by facts supported by clear and convincing evidence. *Ethicon*, 135 F.3d at 1461. To meet the burden of clear and convincing evidence, the alleged co-inventors must prove their contribution to the conception of the invention with more than their own testimony concerning the relevant facts. *Trovan*, 299 F.3d at 1302 (citing *Price v. Symsek*, 988 F.2d 1187, 1194 (Fed. Cir. 1993)). Whether the co-inventor’s testimony has been sufficiently corroborated is evaluated under a “rule of reason analysis,” which requires that an “evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the inventor’s story may be reached.” *Price*, 988 F.2d at 1195. Corroborating evidence may take many forms. Reliable corroboration preferably comes in the form of records made contemporaneously with the inventive process. *Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1350-51 (Fed. Cir. 2001). Circumstantial evidence of an independent nature may also corroborate. *Trovan*, 299 F.3d at 1303. Additionally, oral testimony from someone other than the alleged inventor may corroborate. *Id.*

Gemstar-TV Guide Int'l, Inc. v. ITC, 383 F.3d 1352, 1382 (Fed. Cir. 2004)

9. *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1473 (Fed. Cir. 1997).

the invention even though he might solicit the advice or input from others. Therefore, conception is the key for determining whether an individual is an inventor or not. Inventorship is determined on a claim-by-claim basis. If an inventor can see his or her conception of an invention in a particular claim, then that person is an inventor of the overall patent. Determination of inventorship through the claim analysis can become somewhat difficult for a novice to patent law because the analysis requires a claim-by-claim basis not unlike that for construction of claim in an infringement or an invalidity analysis. However inventors typically can point to their invention in a particular claim and state affirmatively whether they have had a hand in the conception of that particular claim.⁷ Inventors must use facts supported by a clear and convincing evidentially standard to establish their invention.⁸ However, the level of “inventiveness” need not be very high. The courts set “no explicit lower limit on the quantum or quality of inventive contribution required for a person to qualify as a joint inventor.”⁹ Except that quantum of contribution cannot be “insignificant.”

Conclusions

In conclusion, it is important for faculty and students working in entrepreneurial activities to be able to identify their claims and their patents where they feel that they have contributed as inventors. That is performed on a claim-by-claim analysis. If an individual feels as if he had conceived the subject matter of that claim, using basic claim construction procedures, then that individual will be considered to be an inventor. The inventor in that case then owns an equal and undivided share of the entire patent with the other inventors in the patent.

Ownership is an issue separate from inventorship. Owners can assign their interest in their portion of a patent over to a third person or entity just like any property interest. In addition, beforehand, the inventors can agree to adjust the undivided share ownership in a patent. It is important for faculty and students to recognize the separate concepts of inventorship and ownership and be able to adjust their interest in patents to accurately reflect their participation in the inventive act.