

# Determining Inventorship for US Patent Applications

By Patrick G. Gattari

US patent law provides that whoever “invents” patentable subject matter is entitled to a patent.<sup>1</sup> Thus, US patent applications must list the “true and only” inventors.<sup>2</sup> While this rule seems clear, the Court of Appeals for the Federal Circuit has addressed the question of proper inventorship at least a dozen times within the past three years and has reversed or vacated nearly one-half of the decisions from the district courts on this issue.<sup>3</sup> Thus, there is an important but often underemphasized role in correctly determining who should be listed as an inventor for a patent.

## Who Are the True and Only Inventors?

In the United States, invention is a two-step process:

1. Conception of the idea or subject matter of the patent claims, which may be comprised of several claims; and
2. Reduction of the idea to practice, or making a working example of the claimed invention.

Determination of proper inventorship focuses almost exclusively on the conception step,<sup>4</sup> requiring the identification of each person who conceived the idea or ideas of the patent claims.

In patent law, conception is normally defined as “the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is thereafter to be applied in practice.”<sup>5</sup> The phrase “definite and permanent” means that only ordinary skill would be necessary to reduce the invention to practice, or make a working example of the invention, without extensive research or experimentation.<sup>6</sup> Therefore, conception is complete when an idea is sufficiently definite and permanent to permit one with ordinary skill in the field to reduce it to practice without undue experimentation.<sup>7</sup> Conception must be complete and must include every feature of the subject matter claimed in the patent.<sup>8</sup>

Because an inventorship determination focuses on the invention *claimed* and not merely *described* in a patent, the first step in an inventorship analysis is to de-

termine the scope and meaning of the claims.<sup>9</sup> Once the exact subject matter of the patent claims has been determined, the appropriate individuals can be verified who conceived each of the claims that represent the invention.<sup>10</sup>

The following points should help in an inventorship determination.

An inventor is:

- A person who conceives the subject matter of at least one claim of the patent.
- Two or more persons who collaborate to produce the invention through aggregate efforts.

An inventor is not:

- Someone whose only contribution is reducing an invention to practice by exercising ordinary skill in the art.
- A technician who simply performs experiments or assembles the invention.
- The supervisor or department manager of the person who conceived the invention.
- Someone whose only contribution is an obvious element to the invention.
- Someone whose only contribution is participation in consultations about the invention before or after conception of the invention.
- A person who only conceives of the result to be obtained but not the idea of how to achieve it.
- A person who only discovers the problem (unless he contributes to the solution).
- A person who merely provides a suggestion or improvement but who does not work to fit the suggestion or improvement into the invention.
- A second inventor of the subject matter of the inven-

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tion who did not collaborate with a first inventor of the subject matter of the invention.

### **Joint Inventors**

A patented invention may be the work of one or more inventors.<sup>11</sup> Joint inventorship occurs when two or more people collaborate on an invention, with each person contributing to the subject matter of the patent claims.<sup>12</sup> A joint inventor is not required to contribute to the entire invention or to every claim of the patent.<sup>13</sup> A significant contribution to even one claim in the patent is enough to make someone a joint inventor.<sup>14</sup> The law specifies no lower limit to the amount that each individual is required to contribute to qualify as a joint inventor only that the contribution made be significant and inventive.<sup>15</sup> A contribution is considered significant when it helped make the invention patentable, such as making the invention novel or non-obvious.<sup>16</sup>

A person does not qualify as an inventor simply because his or her contributions appear in the claims of the patent because many claim elements may not be novel or may be obvious.<sup>17</sup> In addition, an individual does not qualify as a joint inventor by merely explaining well-known principles or the current state of the art.<sup>18</sup>

For example, in *Hess v. Advanced Cardiovascular Systems*, an engineer for a plastics manufacturer sought to be added to a patent for a heart catheter. The engineer identified potential materials for the catheter and explained the properties of the materials to the inventors who were heart surgeons. The court of appeals found that the engineer, who had no experience with angioplasty, did not qualify as an inventor simply because he suggested materials and explained their properties to the inventors. The materials and their properties were well known and could have been found in textbooks. According to the court, the engineer did no more than a skilled salesman would do in explaining how his employer's product could be used to meet a customer's requirements.<sup>19</sup>

Finally, participating or contributing only to the reduction to practice of the invention is not sufficient, even if the reduction to practice is the most time consuming, costly, and difficult part of the invention process. This is true even if the patent specification discloses an embodiment developed by the contributor to satisfy the best-mode requirement.<sup>20</sup>

However, if the invention as originally conceived does not work as it should and a technician reducing the invention to practice then devises a way to make it work, this technician becomes an inventor because the invention would not have been complete without the contribution of the technician.<sup>21</sup>

### **Joint Inventors Must Be Collaborators**

In addition to participation in conception of the idea, another requirement of joint invention is a collaborative effort to produce an invention.<sup>22</sup> In other words, there must be some element of joint behavior, such as collaboration or "working under common direction."<sup>23</sup> Examples of such behavior include when one inventor sees a relevant report and builds upon it or when one inventor hears another's suggestion at a meeting.<sup>24</sup> Joint invention requires communication between the inventors, though collaborators are not required to work at the same location or at the same time.<sup>25</sup>

Individuals cannot be joint inventors if they are completely ignorant of what each other is doing until long after they have completed their individual, independent efforts.<sup>26</sup> Even if two inventors work at the same company, there can be no collaboration and no joint invention if they are wholly unaware of each other's work.<sup>27</sup>

For example, in *Kimberly-Clark Corp. v. Procter & Gamble Distributing Co.*, a P&G employee independently invented disposable diapers with inboard flaps. The employee did not publicize the invention nor make it the subject of development records. Years later, a second P&G employee independently conceived the same invention. P&G filed a patent naming the second inventor but not the first. Kimberly-Clark also filed a patent for the invention based on the work of its employees. In a dispute over who first invented the diapers, P&G sought to add its first inventor to the second inventor's patent. If successful, P&G would be entitled to the first inventor's invention date, thereby pre-dating the Kimberly Clark's invention date. The court of appeals found that the first P&G inventor could not be added to the second inventor's patent because the first and second P&G inventors were unaware of each other's work.<sup>28</sup>

To collaborate, the requirement is clear: Joint inventors must be working toward the same end, on the same subject matter, and producing an invention by their aggregate efforts.<sup>29</sup>

### **Invention Disclosure Should Be Scrutinized for Proper Inventorship**

Invention disclosures often include people who are somehow connected with the invention but are not really inventors. For example, a disclosure might identify the true inventors along with their supervisors and various co-workers who provided suggestions, as well as technicians who helped complete the invention. There are a number of reasons for this. For example, an employer might name more than the true inventors in a patent application to promote teamwork or for corpo-

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rate political reasons. Employees also are often eager to be named as inventors to build their credentials or to qualify for bonus or royalty payments. Many people fail to realize, however, that the determination of inventorship is substantially different than the determination of authorship for a publication. Inventorship is a legal, not a collegial or team-building, matter.

In addition to incentives to add people as inventors on a patent, there are also incentives to avoid inclusion of all the true inventors on an application. For example, where the inventors are employed by different organizations, one of the organizations may want to avoid having to share ownership of the patent with another organization. In the absence of an agreement related to ownership, only the named inventors own the patent. In another example, an employee may have left a company before the patent is filed. If the former employee is hostile to the company, existing employee inventors may have an incentive to avoid adding the former employee.

Despite the incentives to include additional or fewer individuals than the true inventors on a patent, the consequences can obliterate any hoped-for benefit. A court may find a patent invalid when it names more or less than all of the true inventors.<sup>30</sup> Therefore, the proper determination of inventorship is of paramount importance when filing a patent application.

### **Correction of Errors in Inventorship**

Although the rule of naming true inventors may seem stringent, a mistake may not be fatal to the patent. Correction of inventorship is generally allowed when the failure to name the correct inventors occurs without deceptive intent.<sup>31</sup> In fact, errors in inventorship can be corrected even after a patent issues.<sup>32</sup>

However, when there is deceptive intent in naming inventors, the patent is invalid and unenforceable. Even if the correct inventorship can be established, a patent obtained through fraud remains unenforceable.<sup>33</sup>

For example, in *Frank's Casing Crew v. PMR Technologies*, the dispute involved a patent that was issued to two people who were not inventors and who purposely concealed the name of the true inventor from the Patent and Trademark Office. Years later, the assignee of the true inventor effectively proved the correct inventorship and sought to enforce the patent. Nevertheless, the court of appeals found that the patent was unenforceable because of the deceptive intent of those who applied for the patent and that the "innocent" inventor could not enforce the patent either.<sup>34</sup>

Although the patent rules seem to liberally allow the correction of errors in inventorship, it is a mistake to rely on the ability to correct inventorship instead of

properly performing an inventorship determination in the beginning, before a patent application is filed. And even if correction of inventorship is necessary, it is easier to accomplish while a patent application is pending than after it has issued. If there is dispute related to inventorship during prosecution of an application, such as when one inventor files a patent without a second inventor and the first inventor does not agree that the second inventor is properly included on the patent, the second inventor need only prove his inventive contribution by a preponderance of the evidence. In other words, the second inventor must show that he is more likely than not an inventor. After the patent issues, however, the second inventor needs to prove his inventive contribution by clear and convincing evidence, which is a higher burden of proof than a preponderance of the evidence.<sup>35</sup>

To correct inventorship when there is not dispute, each person being added or deleted must sign a statement that the error in inventorship occurred without deceptive intent.<sup>36</sup> This can be a problem when one or more of the persons is not available, as they may have left the company or may now be hostile to the company and refuse to sign the statement. After a patent issues, correction of inventorship also requires a statement from the inventors named on the issued patent agreeing to the change in inventorship.<sup>37</sup> Again, locating inventors, as well as obtaining agreement from everyone, perhaps several years after a patent has issued, may be difficult. The administrative expense alone is enough reason to avoid this practice. In addition to administrative hassles, an after-filing correction of mis-joined inventors is likely to be a red flag later on to those seeking to invalidate the patent in litigation.

Also, inventorship can change during the prosecution of an application, and claim amendments during application for a patent can result in changes of inventorship. Since inventorship is based on what is being claimed, the most common situation involving a change in inventorship is when one or more claims are canceled, whether when responding to a restriction requirement or for reasons related to patentability. Any person who is an inventor or co-inventor of only the subject matter of the canceled claims must then be removed from the list of inventors.

### **Do It Once and Do It Right**

For all the above reasons, every reasonable effort should be made to get the inventorship correct before filing an application and thereby avoid the need to correct it later. And the inventors themselves should keep accurate records of their inventive contributions.

While the final inventorship determination cannot

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be made until the claims have been drafted, the best time to begin the inventorship determination is as soon as the invention disclosure is prepared. Ask the tough questions then, and be prepared to smooth over relations with those persons who believe they are inventors but do not understand the legal aspects and consequences of inventorship. If there are close calls, the decisions should be clearly documented.

Avoiding the conflict and complication that can arise from incorrect or incomplete identification and determination of inventorship is an important objective for legal counsel as well as patent owners. A thorough job of invention disclosure can assure that a patent remains enforceable, regardless of challenge at a later date.

## Notes

1. 35 U.S.C. § 101.
2. *Hess v. Advanced Cardiovascular Sys., Inc.*, 106 F.3d 976, 979-980 (Fed. Cir. 1997), *cert. denied*, 520 U.S. 1277 (1997).
3. The Court of Appeals for the Federal Circuit is the appellate court that hears the appeals for patent cases that originate in the nation's federal district courts.
4. *Burroughs Wellcome Co. v. Bar Labs., Inc.*, 40 F.3d 1223, 1227-1228 (Fed. Cir. 1994).
5. *Id.*
6. *Id.*
7. *Ethicon, Inc. v. United States Surgical Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 923 (1998).
8. *Id.*
9. *Trovan, Ltd v. Sokymat SA*, 299 F.3d 1292, 1302 (Fed. Cir. 2002).
10. *Id.*
11. 35 U.S.C. § 116.
12. *Ethicon, Inc.*, 135 F.3d at 1460.
13. 35 U.S.C. § 116.
14. *Ethicon, Inc.*, 135 F.3d at 1461.
15. *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1473 (Fed. Cir 1997).
16. *Levin v. Septodont, Inc.*, 34 Fed. Appx. 65, 72 (4th. Cir. 2002).
17. *Id.* at 73.
18. *Hess*, 106 F.3d at 981.
19. *Id.*
20. *See Ehticon, Inc.*, 135 F.3d at 1464.
21. *Id.*
22. *Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co.*, 973 F.2d 911 (Fed. Cir. 1992).
23. *Id.* at 917.
24. *Id.*
25. *Id.* at 916-917.
26. *Id.* at 917.
27. *Id.*
28. *Id.*
29. *Id.*
30. *Frank's Casing Crew & Rental Tools, Inc., v. PMR Techs., Ltd.*, 292 F.3d 1363 (Fed. Cir. 2002); *Trovan*, 299 F.3d at 1301.
31. 35 U.S.C. § 116.
32. *Id.* § 256.
33. *Frank's*, 292 F.3d at 1377-1378.
34. *Id.*
35. *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1366-1368 (Fed. Cir. 2004).
36. 37 C.F.R. § 1.48.
37. *Id.*

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