

## **Inventorship, Co-Inventorship vs Authorship: Who They Are, Who They Aren't**

Determining who should be named as an inventor on a patent application is a difficult, often subjective, task and not at all the same as deciding who should be listed as authors of a publication. But it is a matter of law. If the names on a patent don't match with the legally defined inventors, it can be invalidated with disastrous results.

Because people are co-authors of a peer-reviewed article, or students, co-workers, supervisors, or employees, doesn't entitle them to be co-inventors. For instance, sometimes students or technicians are included as co-authors on a publication to recognize their contribution for having carried out the inventor's instructions. Or a department chair or thesis adviser may be honored or shown deference in the same way. However, unless they contribute in a legally defined way, they cannot be considered co-inventors. Conversely, if they did contribute, even accidentally or in minor proportion, then they must be considered co-inventors.

"Conception" and "reduction to practice" are the two elements of inventorship. Conception is the completion of the mental part of the invention. When an inventor has a definite and permanent idea of the invention that would require only ordinary skill to reduce to practice, conception is complete. The key is that the idea must be a specific solution to a problem, not a general research goal. Reduction to practice must be carried out personally by the inventor or through someone under the inventor's direction. Reduction to practice can be actual or constructive. (Don't be confused: Physical "construction" of an invention is considered actual reduction to practice.) When an inventor files a patent application that "describes prophetically ... how to reduce the invention to practice," that application is considered the legal equivalent of actual reduction to practice. Naming co-inventors is a gray area that comes up often, says Deanna Shirley, a patent attorney for the firm of Rivkin, Radler & Kremer. Co-inventors can even change over time, as an invention is developed and as claims are allowed or disallowed, she said. (A claim is a legal term for the very precise explanations of the scope of an invention.) A co-inventor must have some role in the final conception of an invention as it is patented. "Who conceived is the critical question," Shirley said.

William H. Needle, of Needle & Rosenberg, Atlanta, Ga., suggests applying this test to help determine inventorship: Ask of a potential co-inventor's contribution: "If this idea had not been contributed, would the claimed invention exist?" If the answer is no, then that person is probably a co-inventor. When faced with a situation that may lead to an invention, Needle divides co-workers into three groups: 1) Those who contribute ideas that result in the development of an invention as claimed. Members of this group should be considered inventors; 2) Those who contribute labor, supervision, or routine techniques and other non-mental contributions. Members of this group should not be considered inventors; and 3) Those who contribute ideas while an invention is being developed, but whose ideas don't contribute directly to the claimed invention. This group also should not be considered as inventors.

The claims of the patent are the standard for determining inventorship. All inventorship questions must be analyzed against the specific steps that make the invention perform differently from any prior part. To put it simply, a sole inventor must have conceived the ideas in all of the patent's claims; a co-inventor must have conceived the idea in at least one of the patent's claims. To help avoid inventorship disputes, it's a good idea to become familiar with your institution's invention disclosure procedures. Giving clear information about your research to the patent or licensing professional in your tech transfer office and keeping good records of everyone involved in the inventive process—students, engineers and technicians—can help simplify the inventorship question.

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