Software Firms and Patent Scope Doctrines

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Abstract

The Federal Circuit's "written description" doctrine provides that not only must one "enable" the subject matter covered by a patent claim (i.e., teach enough for someone to construct most embodiments covered by the claim), but one must also specifically signal in the specification what one intends or understands as the essence of one's invention. The ostensible reason for the rule is to prevent people from claiming a different aspect or feature of the broadly enabled invention. It often has the effect of preventing claim amendments that reflect a shift in the inventor's understanding of what's important in the technological area disclosed in the specification -- sometimes, in response to a competitor's product which becomes public after the inventor's original claims are filed.

An important case involving this doctrine arises in the software Industry, *Lizardtech, Inc. v. Earth Resource Mapping, Inc.*[1] In this case involving sophisticated data compression and display software. The Federal Circuit invalidated the patent involved because it did not meet the "written description" requirement -- the court said the claim at issue was not specifically supported in the specification. To be precise, the court said that the claim omitted a specific feature that was consistently present in the examples and description of the technology in the specification.

In this article, I argue that this case was wrong. Moreover, I think it serves as an excellent case study on several important issues. First, because I believe it would have been trivial for the software engineers to build more variants of what they disclosed, including those that omitted the specific feature used in the examples, the court in effect required future inventors to build more trivial variations on their inventions. This is socially wasteful, because building these mechanical, rote embodiments comes at a significant opportunity cost -- the cost of not getting onto the next significant research project or corporate task. The court's analysis is blind to these costs.

In addition, decisions such as *Lizardtech* reduce the option value of patent applications, by constraining what firms can claim during the pendency of their applications. I hope to capture some sense of the costs of this, which is a pervasive effect of the Federal Circuit's unconsidered, uncoordinated "easy patent (section 103)/narrow patent (section 112)" doctrinal push. I hope also to shed some light on proposals for "industry-specific" patent rules (a la Mark Lemley and Dan Burk),[2] highlighting the tension between preserving a

[1] 424 F.3d 1336 (Fed. Cir. 2005).
[2] Dan L. Burk and Mark A. Lemley, Policy Levers in Patent Law, 89 Va. L. Rev. 15757 (2003).

reasonable range of options for patent applicants and micro-tailoring patent scope to the requirements of various industries.

This article builds on these general insights with in-depth information from the firm involved, to describe its commercial product and research efforts and get a sense of the firm's business strategy. The indirect goal here is to put some flesh and bones on a real-life innovating software firm. In addition to illustrating the “opportunity cost” approach to the written description issue, this “case study” also helps in the debate over software patents, by bringing attention to a single firm and its technology, and by showing where patents fit into this firm's corporate strategy. In this sense, the article describes a case study of the entry and financing issues highlighted in this Symposium, and in particular in the ongoing research of Professor Ronald Mann.