

PATENT LINCHPIN FOR THE 21ST CENTURY?—BEST MODE REVISITED

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“If this is the best of all possible worlds, what then are the others?”

-Francois M.A. Voltaire [1694-1778]

I. INTRODUCTION

A quarter-century after one of our co-authors explored the need for, and value to society of, the best mode disclosure requirement in patent practice,¹ the authors are revisiting the subject. During the intervening years, there have been significant changes in how business is conducted, notably in favor of an increased volume of global business transactions. This increase is largely attributable to technological advances, particularly in enhanced communications resulting from the widespread use of the Internet, as well as from the impact of international treaties lifting trade restrictions among nations, thereby facilitating the exchange of goods and services.

These changes have brought countries together to consider a new global paradigm for patent law based on the premise that harmonizing the patent laws of individual nations would simplify the patenting process and thereby promote a freer exchange of ideas through an enhanced volume of published patent applications. At present, seeking patent protection in individual countries can be prohibitively expensive, particularly for small companies and independent inventors. Further, compliance with differing,

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¹ See generally Dale L. Carlson, *The Best Mode Disclosure Requirement in Patent Practice*, 13 New. Eng. L. Rev. 246 (1977).

and sometimes conflicting, substantive and procedural requirements of individual patent offices can be a challenge.²

As the world moves toward a truly global market, international patent harmonization becomes increasingly desirable to the point of becoming ultimately inevitable. Although some procedural harmonization has already occurred,³ substantive harmonization is still a seemingly elusive goal. As negotiations over substantive harmonization take place, the United States (U.S.) will have the opportunity to consider, and to decide, whether it should continue to support the best mode disclosure requirement, or whether it should sacrifice the requirement as a bargaining chip in exchange for concessions from nations that lack, or do not support implementing, the requirement.⁴ Likewise, foreign nations that either have the requirement, or are entertaining it, will have an opportunity to have their voices heard in the harmonization negotiations.

This article begins by examining the significance of the best mode requirement in the U.S., highlighting its linchpin significance to the U.S. patent system. Next, the requirement's present role in the international arena is examined, including its role in patent harmonization negotiations. The authors believe that strengthening national and multinational patent systems by means of more universal adoption of best mode will, among other things, stem the likelihood that developing countries will turn to compulsory licensing as a means to effect technology transfer to their own countries.

II. THE BEST MODE REQUIREMENT IN THE UNITED STATES

A. *Public Policy Underpinnings*

The importance of a patent system in the U.S. was recognized early on in the development of this country. The Constitution itself provides for exclusive patent rights to inventors for a limited time,⁵ as a means for

² See generally Anthony D. Sabatelli & J.C. Rasser, *Impediments to Global Patent Law Harmonization*, 22 N. Ky. L. Rev. 579, 579-80 (1995) (discussing the need for patent law harmonization).

³ See e.g. *Patent Cooperation Treaty* (June 19, 1970), 28 U.S.T. 7645.

⁴ Steven B. Walmsley, *Best Mode: A Plea to Repair or Sacrifice This Broken Requirement of United States Patent Law*, 9 Mich. Telecommun. & Tech. L. Rev. 125, 160 (2002).

⁵ Under article I, section 8, clause 8 of the U.S. Constitution, Congress has the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

“promot[ing] the progress of [s]cience.”⁶ It goes without saying that the U.S. patent system exists to benefit society as a whole stemming from the *quid pro quo* that the patentee must give to society in exchange for receipt of the patent grant.⁷ From society’s perspective, the grant of the temporary monopoly associated with a patent grant is intended primarily to encourage inventions, and only secondarily as a way to maximize the inventor’s economic gain.⁸ Of course, absent a perceived potential for economic gain, the inventor might not undertake the research and investment necessary to create the invention in the first instance, much less patent it. Thus, without the incentive of a patent, it is likely that an invention will either not be invented, or will instead be maintained as a trade secret in order to afford at least some semblance of a competitive advantage vis-à-vis competitors in the marketplace in hopes of insuring an adequate return on investment.

Either result, namely either discouraging the making of inventions, or discouraging their disclosure by maintaining them as trade secrets, runs counter to the Constitution’s goal of advancing science. Science simply cannot be advanced if it is kept “under cover”—the exact impact of preserving an invention as a trade secret. Any third party wishing to improve on an invention cloaked in secrecy generally needs to reverse engineer an embodiment of the invention appearing in the marketplace to provide a baseline for improving upon that invention. As an additional complexity, some inventions are reverse-engineer-able, while others are not.

To avoid the quagmire associated with a cloak of secrecy, society enters into a bargain with the inventor that spurs the elements of the invention to be embodied in the form of a patent. By virtue of this bargain, the inventor receives a time-limited monopoly to exclude others from the invention, while society is given a degree of assurance that the inventor will make a full and complete disclosure of the invention in the patent application, including the best mode of carrying out the invention.⁹ This

⁶ For a discussion on the meaning of “to promote the Progress of Science and the useful Arts” see Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: The Anatomy of a Congressional Power*, 43 IDEA 1, 81 (2002) (concluding that the “to promote” language does restrain the power of Congress in granting monopolies).

⁷ Andrew Beckerman-Rodau, *Patent Law—Balancing Profit Maximization and Public Access to Technology*, 4 Colum. Sci. & Tech. L. Rev. 1, ¶ 17 (July 15, 2002) (available at <http://www.sctr.org/cite.cgi?volume=4&article=1> (accessed Feb. 18, 2005)).

⁸ *Id.* at ¶ 20.

⁹ 35 U.S.C. § 112 (2000) imposes the following disclosure obligations on inventors:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall

disclosure is provided to the public by publication of the patent application, normally eighteen months from its priority filing date in the Patent Office. The publication is freely available on the Patent Office's website.¹⁰ The U.S. Supreme Court has observed that the "ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure."¹¹ The apparent premise underlying this goal is that the sharing of scientific ideas will stimulate more research, and thereby spawn a greater number of inventions than would otherwise occur, which in turn stimulates further research, and in turn, more inventions.

"The best mode requirement, first enacted in 1870, is [a key] consideration exacted" in exchange for the limited monopoly rights granted to the inventor.¹² It mandates the inventor to effectively insure that the quality of disclosure contained in the patent application is indeed the best that he or she can provide. In essence, the best mode requirement is the linchpin of the U.S. patent system¹³ for the very reason that it speaks not only to the adequacy or sheer volume of the disclosure contained in the patent application, but, more importantly, to the disclosure's quality.¹⁴

In short, the best mode requirement compels disclosure of the very heart of the invention as viewed from the inventor's perspective. Publication of this core aspect of the invention furthers the Constitution's goal of encouraging new inventions by affording clearer "recipes" to the subject invention than would otherwise be available. A clearer picture of the subject invention facilitates the fleshing-out of new inventions by third parties reading the patent or published patent application.¹⁵ Moreover, the mere existence of the best mode mandate provides a safeguard to the public against the natural human tendency for inventors to disclose only what they know to be inferior modes, while retaining the best for themselves.¹⁶ Absent

set forth the best mode contemplated by the inventor of carrying out his invention.

¹⁰ See <http://www.uspto.gov>.

¹¹ *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989).

¹² Albert L. Jacobs, Jr., *The Best Mode Requirement: What the Law Is and What It Should Be*, 16 *Hous. J. Int'l. L.* 533, 535 (1994).

¹³ See *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983) (stating "[e]arly public disclosure is a linchpin of the patent system").

¹⁴ See generally Giles S. Rich, *The Relation Between Patent Practices and the Anti-Monopoly Laws*, 24 *J. Pat. Off. Socy.* 85 (1942).

¹⁵ *Garlock*, 721 F.2d at 1550; see Todd R. Miller, *The Public's Right to Know? Or a Red-Tape Nightmare? Demanding That Best Mode Disclosure Be Updated*, 35 IDEA 261, 266-67 (1995).

¹⁶ *In re Nelson*, 280 F.2d 172, 184 (C.C.P.A. 1960).

the existence of the best mode requirement coupled with the exclusionary right attributable to the patent monopoly, this natural human tendency would doubtless be irresistible.

It goes without saying that, absent the best mode disclosure obligation, the primary purpose of the patent system would be frustrated because the inventor would be permitted to retain the details of his or her invention as trade secrets while gaining the benefit of the patent monopoly.¹⁷ Such a result would allow inventors to effectively have their cake and eat it too. Without the best mode requirement, the patent monopoly's interference with the "normal" workings of the marketplace would be harder to justify because society would presumably be shortchanged as to both the volume and quality of disclosure it receives in exchange for the patent grant.

Two types of benefits flow from a patent grant. First and foremost, the information that the society receives from the disclosure of the invention in the patent presumably promotes innovation. Second, the patent grant serves as a tangible vehicle for promoting private funding of research and development by virtue of its embodying the intangible asset underlying the invention.¹⁸ For both benefits, the best mode requirement provides a platform for gauging the sufficiency of the patent's disclosure, thus helping to strike the desired balance between encouraging invention and encouraging competition.

Absent best mode, the patent system as a whole would be undermined since such an emasculated system would permit the granting of patent protection for an invention that is at least partly protected by trade secrecy. The inventor would thus be able to have the best of both the patent and trade secret worlds. Instead of relying merely on trade secret protection, which is often unpredictable,¹⁹ or on patent protection, which is time-limited and turf-limited, he or she could rely on a combination of both forms of protection.

In point of fact, the "crown jewels" of the invention could be protected by trade secret during the life of a patent issuing without best mode compliance. After the patent's expiration, the inventor would be able to continue to maintain the best mode or "heart" of the invention as a trade

¹⁷ Michael R. Franzinger, *Best Mode Requirement: Northern Telecom Ltd. v. Samsung Elecs. Co.*, 16 Berkeley Tech. L.J. 165, 165 (2001).

¹⁸ Beckerman-Rodau, *supra* n. 7, at ¶ 24.

¹⁹ *Id.* at ¶ 18 (explaining that trade secrets can be reverse engineered or there can be independent development of the invention). Furthermore, inadvertent disclosure would vitiate the trade secret. Thus, the longevity of the trade secret is unknown to the inventor. This makes it difficult to quantify the potential risks of protecting the invention by trade secret law.

secret,²⁰ assuming, of course that the undisclosed best mode continues to retain the attributes of a trade secret. Those attributes necessitate its being: (a) useful in the relevant industry; and (b) not generally known in the industry. In short, without the best mode requirement, the entire foundation of the patent system is weakened, and the patent system itself is placed at risk. As one commentator put it, without full disclosure, “the public is left with the quid pro quo equal to a ‘white elephant’ gift while the inventor steals the show in the form of, literally, a ‘patented trade secret.’”²¹ A system that would allow the inventor to suppress information and preserve it as a trade secret while obtaining a patent monopoly would inhibit, rather than stimulate, innovation by third parties having no access to the trade secret.

Although some have suggested that disclosure solely sufficient to provide “enablement” of the invention should be adequate to protect society’s interests, from a practical standpoint this is not, and cannot be, the case. Best mode and enablement requirements are predicated on different policies and are designed to achieve different, albeit complementary, goals.²² While the enablement requirement circumscribes a modicum of disclosure, that disclosure need only be sufficiently detailed to allow those skilled in the relevant art, without undue experimentation, to make and use the invention. Indeed, no working example is required, and an example based merely on hypothesized results may suffice.²³

Thus, enablement is a less-than-stringent requirement. Disclosing any mode of carrying out the invention evidences compliance with enablement, even a mode that the inventor knows to be inadequate in the marketplace. This puts any competitor seeking to enter the market upon expiration of the patent at a huge competitive disadvantage, and undermines the quid-pro-quo for the patent grant.

Best mode, on the other hand, serves two key functions not comprehended, much less furthered, by the enablement requirement. First, it helps to insure that the public will understand not only how to make and use the invention, but also the best way contemplated by the inventor of carrying out the invention.²⁴ Second, it helps to insure that members of the public will

²⁰ Arguably, there are reasons why an inventor might choose to disclose the best mode even if it is not compelled. This, however, allows the inventor to do a cost benefit analysis at the expense of the public.

²¹ Miller, *supra* n. 15, at 286.

²² Jerry R. Selinger, *In Defense of “Best Mode”: Preserving the Benefit of the Bargain for the Public*, 43 Cath. U. L. Rev. 1071, 1096-97 (1994).

²³ *Atlas Powder Co. v. E.I. Du Pont de Nemours & Co.*, 750 F.2d 1569, 1577 n. 1 (Fed. Cir. 1988).

²⁴ *In re Gay*, 309 F.2d 769, 773 (C.C.P.A. 1962).

have sufficient information to allow them to compete fairly with the patentee after the patent expires.²⁵ Removing these functions by elimination of best mode would doubtless slow down the evolutionary development of innovation. Such slowing would surely have detrimental economic and societal implications.

In sum, the best mode disclosure requirement helps insure that the “public receives an honest disclosure in return for the grant of exclusivity.”²⁶ Furthermore, the existence of the requirement helps guarantee that the public at least has access to the information necessary to fully comprehend the benefits of the inventor’s innovation. Fulfilling the enablement obligation, while important in its own right, does not insure that the public receives all, much less the crux of, the invention to which it is entitled in exchange for the patent monopoly.²⁷

B. Criticism of the Requirement and Developments in the Law

The main criticism of the best mode requirement is that the scope of the required disclosure is unclear.²⁸ The criticism is generally founded on the premise that the requirement is too broad and uncertain, and that this uncertainty increases the expenses associated with already-too-costly patent litigation.²⁹ Moreover, the critics postulate that a typical company is faced with spending an enormous amount of money for over-complying with the requirement to effectively mitigate risk caused by the alleged uncertainty. Another way to mitigate the risk associated with the alleged uncertainty would be to elect trade secret protection, and forego patent protection. The critics opine that a best mode requirement fraught with uncertainty actually discourages innovation, thwarting the patent system from accomplishing the very thing it was put in place to achieve.

This article addresses the criticism, and concludes that developments in the law relating to best mode over the last quarter of a century have significantly reduced any uncertainty that may have once existed. Now, the state of the best mode requirement is sufficiently clear to allow for straightforward compliance.

²⁵ *Christianson v. Colt Induss. Operating Corp.*, 870 F.2d 1292, 1299 (7th Cir. 1989).

²⁶ Selinger, *supra* n. 22, at 1079.

²⁷ *Id.* at 1072.

²⁸ Walmsley, *supra* n. 4, at 156; *see also* Miller, *supra* n. 15, at 280.

²⁹ Miller, *supra* n. 15, at 285 (asserting that “as it stands now, the best mode requirement, as a whole, is extremely unpredictable” and calling for a more narrow definition requiring only disclosure for what is claimed); *see also* Walmsley, *supra* n. 4, at 125.

The clearer vision of the best mode requirement that now exists, as compared to two-and-a-half decades ago, is largely attributable to the implementation of a single court to hear all patent appeals. In 1982, the Court of Appeals for the Federal Circuit (CAFC) was created.³⁰ Since the Supreme Court hears patent cases fairly infrequently, the CAFC is tantamount to the final arbiter on a number of issues that are unique to patent law, including best mode.

Congress' intent behind establishing the CAFC was to provide uniformity and consistency in the construction of the patent laws by creating a single court for hearing patent appeals.³¹ The authors believe this uniformity goal has been largely achieved in the best mode arena by virtue of the CAFC's supplanting the disparate law on the subject in the various circuit courts prior to the CAFC's creation with a more uniform rendition. Even so, at least one critic asserts the creation of the CAFC has led to an overall deterioration in the quality of patents in the years following the Court's inception.³²

Assuming *arguendo* that such criticism is valid, it emphasizes the need to consider the likely negative impact on patent quality that might flow from abolishment of the best mode requirement. That impact is two-fold: (a) the compromising of the patent system's disclosure function, and (b) the removal of a prong of inquiry for possible inequitable conduct by the patent applicant before the Patent Office. Accordingly, instead of making patents easier to attack, weak patents would become more resistant to attack by virtue of best mode elimination since one prong of possible attack would be removed.

Apropos of the CAFC's more uniform vision in deciding best mode cases, the CAFC recently provided a comprehensive review of its best mode decisions in *Bayer v. Schein*.³³ In that case, the Court examined its previous rulings on best mode, and re-visited the metes and bounds of the requirement. In *Bayer*, the Court held that a preferred method of making a claimed invention need not be disclosed in order to comply with the best mode requirement, if the preference does not "materially affect carrying out

³⁰ *Federal Courts Improvement Act of 1982*, Pub. L. No. 97-164, §§ 122-27, 96 Stat. 25, 36-39 (1982).

³¹ See Dale L. Carlson, *A New Patent Court: It's a Good Idea*, 1 Natl. L.J. 15 (Dec. 10, 1979).

³² See Hal R. Varian, *A Patent That Protects a Better Mousetrap Spurs Innovation. But What About One for a New Way to Amuse a Cat?*, N.Y. Times C2 (Oct. 21, 2004) (commenting on a recent book by Josh Lerner and Adam B. Jaffe entitled *Innovation and Its Discontents*).

³³ See generally *Bayer A.G. Corp. v. Schein Pharms., Inc.*, 301 F.3d 1306 (Fed. Cir. 2002).

the invention.”³⁴ Although the Court recognized that it had, on past occasions, found violations when the inventor failed to disclose subject matter that was not strictly within the bounds of the claim, it sought in this case to delineate the limits of the requirement as it applies to non-claimed subject matter.

The Court in *Bayer* noted that the best mode requirement is limited to requiring the disclosure of the preferred ways of carrying out the invention, and does not apply to every preference that the inventor possesses.³⁵ The Court reasoned that this conclusion is consistent with its logic in prior decisions because the prior best mode violations occurred in instances where the preference materially affected the making or using of the invention.

According to *Bayer*, a best mode violation can be found under either of two circumstances. First, it is found when the inventor fails to disclose a preferred embodiment of the claimed invention. Second, it is found when the inventor fails to disclose subjective preferences that relate to making or using the claimed invention, assuming that the undisclosed subject matter materially affects the properties of the claimed invention. This second violation is applicable irrespective of whether or not the subject matter falls within the bounds of the claims.³⁶

The *Bayer* majority opinion was criticized by the concurrence for complicating the best mode requirement by deciding that it can be applied against unclaimed subject matter. The concurring opinion asserted that the bulk of the Court’s precedent limits the scope of inquiry as to best mode to the claimed invention, not unclaimed subject matter.³⁷ In short, the concurring opinion postulates that the majority had effectively created a “new test” for best mode beyond the scope of the claims.³⁸

Although the majority’s analysis in *Bayer* takes into account separate lines of CAFC cases, no new test was propounded by the majority in its Opinion. A review of the Court’s analysis makes it clear that the fact patterns in the cases that purportedly limit the inquiry strictly to a “claims-

³⁴ *Id.* at 1323.

³⁵ *Id.* at 1315.

³⁶ *Id.* at 1316.

³⁷ *Id.* at 1323.

³⁸ *Id.* at 1324 (asserting that “[i]nexplicably and without support in the statute or case law, this *Bayer* opinion widens its best mode net to capture the properties of the claimed invention and further sweeps in any material effect or impact on those properties.”).

only" analysis are distinguishable from those that take unclaimed subject matter into consideration.³⁹

Evidence that the majority's test is not a new one is found in prior law review articles on the subject.⁴⁰ Illustratively, one author criticized the CAFC for vacillating between two different standards on best mode.⁴¹ The two standards are said to be the "claims-only" standard whereby an inventor need not disclose anything that is not an element explicitly recited in one of the claims, and a broader standard that is not limited only to the claims, but instead requires disclosure on the justification that it permits the public to achieve the benefit of the invention.⁴² Critics assert that these two standards leave the best mode obligation vaguely defined, and render the enforcement of U.S. patents "unreasonably unpredictable."⁴³ Echoes of this criticism can be found in the *Bayer* concurrence.

The CAFC has not, in fact, applied two different best mode standards. The reason is that the best mode analyses in the supposedly dichotomous lines of cases are based on the same principles, and the analyses provided in the Court's opinions are reconcilable. The overall theme in both lines of cases is that, if the subject matter is related to the operation of the claimed invention, it must be disclosed—even if that matter is not claimed. After all, it is the disclosure that is set forth in the patent specification that provides the outer limits with respect to what may be claimed in the patent application. Moreover, the fact that an inventor chooses to claim less than he or she may claim, based upon the disclosure provided in the specification, does not preclude that inventor from re-visiting that claim scope during subsequent prosecution.

In point of fact, the standard articulated by the *Bayer* court has been in use throughout the CAFC's existence, and the Court has consistently

³⁹ See *Engel Induss., Inc. v. Lockformer Co.*, 946 F.2d 1528, 1531 (Fed. Cir. 1991) (stating the court went out of its way to find no best mode violation in commenting that "unclaimed subject matter is not subject to the disclosure requirements of § 112"); *see also* Walmsley, *supra* n. 4, at 143. This misconstrues the case. The court was not focusing on the claimed or unclaimed aspects of the non-disclosed crimping procedure, but rather on the timeline of when it understood the inventor to realize that the process was necessary. It found that at the time of the patent application the preferred mode was not crimping, but rather snapping in the corners without crimping. Furthermore, the crimping procedure was used to facilitate transport and handling of the invention, which was a laser. Since this does not have a material effect on the making or using of the invention, it is consistent with the *Bayer* test.

⁴⁰ E.g. Walmsley, *supra* n. 4.

⁴¹ *Id.*

⁴² *Id.* at 135.

⁴³ *Id.* at 125-26.

applied this standard.⁴⁴ The enhancement provided by the majority in the *Bayer* decision is a crystal clear articulation of the standard. Criticism aside, that clear articulation facilitates better compliance with the best mode requirement.

A review of prior CAFC case law supports a finding that *Bayer* is consistent with the Court's earlier decisions. For example, in *DeGeorge v. Bernier*, the CAFC had appeared to construe the scope of best mode more narrowly when it held that “[b]ecause the properly construed count does not include a word processor, failure to meet the best mode requirement here should not arise from an absence of information on the word processor.”⁴⁵ Nonetheless, despite the fact that the Court in *DeGeorge* limited its consideration of the best mode disclosure requirement to only that subject matter falling within the scope of claims, its analysis is not inconsistent with the CAFC's analysis in *Bayer*. The reason is that the Court in *DeGeorge* did not speak to, much less foreclose, the possibility that unclaimed subject matter might trigger the best mode disclosure requirement. To the contrary, as the majority noted in *Bayer*: “No allegation was made that the choice of any particular word processor would have any effect whatsoever on carrying out the claimed invention, which was the claimed circuitry.”⁴⁶ Thus, the *DeGeorge* ruling is not inconsistent with that in *Bayer*. Rather, the Court in *DeGeorge* simply did not address a situation in which a best mode violation may occur outside of the “claims only” context.

Similarly, the test applied in *Teleflex, Inc. v. Ficosa North American Corp.* is distinguishable from, but not inconsistent with, the requirements enunciated in the *Bayer* test.⁴⁷ In *Teleflex*, the applicant failed to disclose certain production details relating to unclaimed subject matter. The Court held that the failure to disclose did not constitute a best mode violation because the information involved unclaimed subject matter relating to production details dictated by customer preference, noting that the invention would work fine without such requirements.⁴⁸

The *Bayer* concurrence asserts that the *Bayer* test is inconsistent with the holding in *Teleflex*. Although the *Bayer* concurrence correctly notes that the *Teleflex* court found, “[t]he claims do not mention any particular material, hardness, or material matching for the clip . . . [t]hus, the information alleged to be part of the best mode . . . is unclaimed subject

⁴⁴ See generally *id.* at 139-47.

⁴⁵ *DeGeorge v. Bernier*, 768 F.2d 1318, 1325 (Fed. Cir. 1985).

⁴⁶ *Bayer*, 301 F.3d at 1319.

⁴⁷ 299 F.3d 1313, 1330 (Fed. Cir. 2002).

⁴⁸ *Id.* at 1332-33.

matter,”⁴⁹ it failed to point out that the *Teleflex* court acknowledged that best mode violations had been found for failure to disclose subject matter *not* strictly within the bounds of the claims that nonetheless bore a strong relationship to the claimed invention.⁵⁰ Indeed, the Court’s inquiry in *Teleflex* indicates that: (a) the undisclosed specifications did not have a material effect on the making or using of the invention;⁵¹ and (b) the particular specifications reflected customer specifications, not the best mode contemplated by the inventor.⁵²

Furthermore, contrary to the *Bayer* concurrence’s assertions, several other prior CAFC decisions recognize that unclaimed subject matter can trigger best mode violations in limited circumstances. For example, in *Randomex, Inc. v. Scopus Corp.*, the claimed invention was a portable machine for cleaning computer disk packs.⁵³ In order to use the apparatus, a cleaning solution was needed but the patent did not claim any such solution.⁵⁴ The patentee did, however, disclose a generic description of two types of cleaning fluids, one of which was a brand-name cleaner marketed by Randomex with no indication as to its formula or which specific product was preferred.⁵⁵ The CAFC found no best mode violation because the addition of Randomex cleaner was simply an addition to the generic description and the inventor, by revealing the preferred trade name for the cleaning fluid, did not conceal what was required to be disclosed.⁵⁶ The court did, however, imply that subject matter outside the claims may have to be disclosed in some circumstances.⁵⁷

Best mode violations relating to unclaimed subject matter have a proper foundation in the earlier case law. In *Dana Corp. v. IPC LP*, the CAFC considered a patent relating to covered rubber valve stem seals.⁵⁸ The inventor did not disclose an unclaimed chemical treatment of the exposed surfaces of the seals although testing indicated that the treatment was necessary for the satisfactory performance of the seal.⁵⁹ Despite the

⁴⁹ *Id.* at 1332.

⁵⁰ *Id.* at 1331.

⁵¹ *Id.* at 1332-33.

⁵² *Id.*

⁵³ 849 F.2d 585, 586 (Fed. Cir. 1988).

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.* at 589-90.

⁵⁷ *Id.*

⁵⁸ 860 F.2d 415, 416 (Fed. Cir. 1988).

⁵⁹ *Id.* at 418.

inventor's arguments that such disclosure was not necessary because the treatment of surfaces was commonly known in the art, the CAFC found a best mode disclosure violation.⁶⁰ This decision is not inconsistent with the Court's analysis in *Bayer* indicating that unclaimed subject matter that is *unrelated* to the operation of the claimed invention does not trigger the best mode requirement since in *Dana* the operation of the seal was affected.

Clearly, the *Bayer* test is not in conflict with this prior precedent of the CAFC. Moreover, it is consistent with the statutory requirement calling for disclosure of the best mode of "carrying out" the invention.⁶¹

It is also consistent with the public policy behind the best mode disclosure requirement. More particularly, since the inventor is not asking for, nor receiving, patent protection for the unclaimed subject matter, society is not justified in requiring such disclosure where the undisclosed best mode information has no impact on the claimed invention. Conversely, when the undisclosed best mode information materially affects the making or using of the claimed invention, the inventor is implicitly requesting a monopoly grant for that. In such circumstances, the public is justified in requiring best mode disclosure. Concealing a preference that has a material effect on the invention gives the inventor an unfair advantage, and such a situation is unacceptable from a public policy perspective.

C. Proposals for Change

As the volume of global transactions and the rate of innovation have increased, the impact of the U.S. patent system on these changes has come under increased scrutiny. Two recently-released reports in favor of reform of the patent system merit consideration because of their implications for the future of the best mode.

The National Research Council of the National Academies (NRCNA)⁶² recently examined the U.S. patent system, and issued recommendations to improve its functioning.⁶³ Among other things, the NRCNA argues in favor of the removal of the best mode requirement.⁶⁴ This recommendation is based on two misperceptions: (1) that the cost of the best

⁶⁰ *Id.* at 418-19.

⁶¹ 35 U.S.C. § 112.

⁶² See <http://www.national-academies.org> (accessed Feb. 18, 2005).

⁶³ *A Patent System for the 21st Century* ch. 4 (Stephen A. Merrill et al. eds., The Natl. Academic Press 2004) (available at <http://www.nap.edu/openbook/0309089107/html> (accessed Feb. 13, 2005)).

⁶⁴ *Id.* at 121.

mode requirement exceeds its value; and (2) that best mode is an obstacle to international harmonization.

Fundamentally, the NRCNA questions the value of the best mode doctrine in patent practice. It contends that the doctrine as applied only gives limited assurance that the best mode will actually be disclosed since the best mode analysis made at the time the inventor files the original application is not updated during the prosecution of the patent.⁶⁵ This argument does not take into consideration the cost-benefit analysis of best mode from the inventor's standpoint. The inventor is faced with two choices. He or she can file early, at which time the burden of disclosing the best mode is less simply because the inventor presumably knows less about the invention at that early date. By doing this, however, the inventor risks missing the crux of the commercially significant aspects of the invention entirely.

Alternatively, the inventor can choose to delay filing in order to "perfect" the invention. At this later date, the burden of the best mode disclosure becomes heavier from the vantage point that the inventor presumably knows more about the best aspects of the invention and therefore must disclose more. At this later date, however, the inventor is more likely to capture the aspects of the invention that are likely to become commercially-significant simply because he or she knows more about the invention then.

Thus the inventor can either: (a) disclose early and disclose less, but risk missing some key aspect of the invention; or (b) disclose later and disclose more, and increase the chances that the significant aspects of the invention are captured in the patent application. This set of options helps balance the risk that society will, or will not, receive a proper disclosure, with the risk that the inventor will, or will not, receive adequate protection for the commercially valuable parts of the invention.

Inventor's options aside, the existence of the best mode requirement itself inherently motivates the inventor to seriously consider his or her obligation to make a disclosure in the patent application that is above and beyond that already provided by the enablement requirement. In other words, the existence of the requirement has a prophylactic effect. That effect insures that most inventors will comply with the requirement; at least most of those who are properly informed of the downside risk associated with non-compliance. A focus on the limited number of times that patents have been invalidated by the CAFC for a best mode violation risks underestimating the value of this prophylactic impact.

The NRCNA perceives best mode as an obstacle to international harmonization efforts, but their analysis is apparently based upon incomplete information. Illustratively, the NRCNA committee erroneously asserts that

⁶⁵ *Id.*

“only the United States imposes a best mode requirement.”⁶⁶ This is a common misconception. In fact, best mode has been fairly widely adopted abroad as discussed below.

As the NRCNA report points out, foreign patent applicants whose home countries lack the requirement may criticize the doctrine as unfair, since their previously filed foreign applications cannot simply be translated for filing in the U.S. without incorporating the best mode.⁶⁷ This argument, however, does not appear compelling when considered in light of the public policy considerations discussed herein. After all, it is the disclosure of best mode that gives full credence to society’s grant of a limited monopoly in the first instance.

Rather than hindering the development of a more efficient worldwide patent system, the best mode requirement promotes such efforts. The NRCNA acknowledges that it “did not consider the thorny issues associated with reconciling differences in intellectual property protection between developing and industrialized countries but is primarily concerned with differences in patent examination among the latter, especially the United States, Europe, and Japan.”⁶⁸ Any proposal so limited in its consideration, if adopted, risks compromising the integrity of the U.S. patent system, and may be incompatible with harmonization efforts intended to have a global, as opposed to merely tri-lateral, focus.

Currently, inventors from the U.S., Japan, and Europe hold the majority of the world’s patents. But developing countries are increasingly demanding, and implementing, patent systems tailored to their specific economic circumstances and development objectives. As developing countries become larger players in the world economy, it is precisely these “thorny” issues that will predominate. Hence, these issues should be considered and addressed now, rather than later, as ignoring them will not make them disappear. In this regard, the authors believe that the best mode requirement can ease the apparent disconnect between developed and developing countries by providing the latter with an alternative to more drastic means of forced technology transfer.

Like the NRCNA report, the October 2003 report issued by The Federal Trade Commission (FTC) should also be considered in light of the best mode requirement.⁶⁹ The FTC conducted an in-depth study of the U.S.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.* at 124.

⁶⁹ See generally Fed. Trade Commn., *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (Oct. 2003) (available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf> (accessed Mar. 31, 2005)).

patent system in an effort to structure policy that promotes innovation. The FTC examined the current balance between competition and patent law and policy. It concluded that, while the CAFC has brought stability and increased predictability to various elements of patent law, the increase in the number of patent applications that are granted by the PTO and upheld by the Court results in too many questionable patents. This in turn upsets the delicate balance between competition and patent law policy and results in anticompetitive effects and increased costs to society. In order to restore a proper balance that would promote innovation, the FTC recommended improving patent quality and lowering the standard for invalidating patents.

While the FTC did not directly make a recommendation regarding best mode, it recognized how important the disclosure requirements are to promoting efficiency and innovation⁷⁰ and found that “current disclosure doctrines accord reasonably well with these goals.”⁷¹ The best mode requirement helps to advance both of the FTC’s goals. The improved disclosure that is mandated necessarily improves the quality of patents vis-à-vis patents that are not subject to the mandate. The requirement also provides an additional ground for invalidation of questionable patents, thereby rendering patents that fail to meet the standard more easily attackable by infringers and potential infringers than they might otherwise be.

Despite the strong policy considerations in favor of the best mode requirement, some critics have raised the specter of its possible elimination, perhaps as a bargaining chip during harmonization discussions.⁷² Such a decision, however, would undermine the U.S. patent system and could adversely affect the results of harmonization initiatives.

Professor Donald Chisum has suggested limited circumstances in which one might entertain modifying the domestic patent laws.⁷³ These circumstances include: (i) correcting problems in the operation of the U.S.

⁷⁰ *Id.* at ch. 4, 26 (“The role of disclosure requirements in shaping patent breadth and the consequences of that breadth for potential market power and cumulative innovation make the nature and effective application of the disclosure requirements a matter of significant competitive concern.”).

⁷¹ *Id.* at ch. 4, 24.

⁷² Walmsley, *supra* n. 4, at 126 (either the best mode requirement should be defined reliably or “the requirement should be discarded entirely by legislative action, preferably as a sacrificial bargaining chip during future international patent law harmonization efforts.”); see also Michael N. Meller, *Principles of Patentability and Some Other Basics for a Global Patent System*, 83 J. Pat. & Trademark Off. Socy. 359 (calling for a workable mode standard as a compromise standard).

⁷³ Anneliese M. Seifert, *Comment: Will the United States Take the Plunge Into Global Patent Law Harmonization? A Discussion of the United States’ Past, Present, and Future Harmonization Efforts*, 6 Marq. Intell. Prop. L. Rev. 173, 197 (2002).

patent laws in order to promote the better functioning of the patent system; (ii) helping the flow of goods and information, while decreasing costs, in a world where the interdependence of industrialized nations is increasing; and (iii) providing concessions in the domestic laws in order to help American inventors gain stronger protection abroad.⁷⁴ Abandonment of the best mode requirement would not meet any of these criteria.

The abandonment of best mode would not help the U.S. patent system function better because it would remove the linchpin of the system, rendering the system weaker. To the contrary, eliminating the best mode requirement would extend monopolies to the best aspects of the invention indefinitely by allowing the inventor the possibility of keeping the best mode of their invention as a trade secret even after the underlying patent had expired. This would result in an increase of the costs of goods to consumers and inhibit the flow of public information needed to foster inventiveness.

Any weakening of the U.S. patent system would not help American inventors gain a competitive advantage in a global market. In the context of global patent filings, the existence of the best mode requirement in a single foreign country would compel loss of trade secret protection to that mode once the patent application publishes in that country. Rather than weakening any country's patent system to accommodate a minimalist standard of disclosure, critics would do well to consider the opportunity that introducing the best mode requirement in harmonization negotiations would offer in terms of strengthening the weaker patent systems of the world, thereby enhancing innovation on a global scale.

III. INTERNATIONAL CONSIDERATIONS

A. *Seeds of a Sea Change Abroad*

Back in 1978 one commentator, J. Philip Anderegg, noted that a growing number of countries were requiring patentees to disclose the "best mode" of practicing an invention. Mr. Anderegg predicted that the best mode requirement would grow in importance internationally as developing countries, which grant a substantial number of patents to foreigners, considered the likelihood that they were getting insufficient disclosure to enable their domestic companies to put the inventions into practice after expiry of the patent protecting the invention. He noted that the complaints regarding the sufficiency of disclosure manifested themselves in calls, during negotiations toward a harmonized international patent system, for

⁷⁴ *Id.* (citing Donald S. Chisum, *The Harmonization of International Patent Law*, 26 John Marshall L. Rev. 437, 443-44 (1993)).

preferential treatment to applicants from developing countries. He also suggested that adherence to the best mode requirement by inventors and patentees in developed countries might diminish the outcry by third world countries for such preferential treatment.⁷⁵

At the time of Anderegg's writing, the best mode requirement appeared in the laws of the U.S., Ireland, Australia, Bahamas, Canada, India, Malawi, Mexico, New Zealand, South Africa, and Zambia.⁷⁶ True to Mr. Anderegg's predictions, the number of countries conditioning patent grants on best mode disclosure has grown significantly.

The list of countries requiring best mode disclosure now includes, in addition to most of those mentioned above, Egypt,⁷⁷ Jordan,⁷⁸ Madagascar, Sri Lanka, Malaysia, Argentina, Bolivia, Brazil, Guatemala, and Honduras,⁷⁹ Barbados,⁸⁰ Costa Rica,⁸¹ Ghana,⁸² Pakistan,⁸³ and Thailand.⁸⁴ Furthermore, variations on a best mode requirement are found in the patent systems of other countries. Illustratively, Japan has a form of best mode built into its patent system. Japan's "specification form" states that "[t]he Applicant should give as many examples as possible of those which he considers bring

⁷⁵ See Philip Anderegg, *The Best Mode Requirement of 35 U.S.C. Section 112*, 6 APLA 219 (1978).

⁷⁶ *Id.* at 245.

⁷⁷ Arab Society for Intellectual Property, *Intellectual Property Laws in Arab Countries*, http://www.aspip.org/site_content.aspx?page_key=Law_of_Egypt%20&lang=en (accessed Mar. 31, 2005).

⁷⁸ *Id.* at http://www.aspip.org/site_content.aspx?page_key=Patents_of_Invention&lang=en (accessed Mar. 31, 2005).

⁷⁹ Phil Thorpe, *Study on the Implementation of the TRIPS Agreement by Developing Countries* (Commn. on Intell. Prop. Rights: Study Paper 7) (available at http://www.iprcommission.org/graphic/documents/study_papers.htm (accessed Feb. 10, 2005)).

⁸⁰ *Patents Throughout the World* B-16 (Alan J. Jacobs ed., 4th ed., West 2002).

⁸¹ *Id.* at C-43.

⁸² *Id.* at G-22.

⁸³ *Id.* at P-2.

⁸⁴ Jakkrit Kuanpoch, *Major Issues in the Thai Patent System*, <http://members.tripod.com/asilaw/articles/jakpat1.html> (accessed Mar. 31, 2005).

about the best results.”⁸⁵ In spite of such mandate, no Japanese court has yet invalidated a patent for failure to disclose this information.⁸⁶

While the trend internationally supports adopting the best mode requirement, a few countries have dropped it. Those eliminations do not appear to be pursuant to any defect in the best mode itself, but rather simply to conform to neighboring countries that do not have it. For example, shortly before Anderegg’s article was published, England abandoned its “best method” requirement when it adopted its Patents Act of 1977.⁸⁷ Ironically, in a report presented to Parliament in July 1970, less than a decade earlier, a “Committee to Examine the Patent System and Patent Law” did not even critique the best mode requirement, much less call for its elimination.⁸⁸ Rather, the requirement appears to have been dropped to bring England’s patent law in-line with other countries in the European Community lacking the requirement in order to facilitate easy entry into the European Patent Convention (EPC).⁸⁹ South Africa abandoned its “best method” requirement in 2002⁹⁰ purportedly in order to conform to international practice, falling

⁸⁵ H. Stephen Harris, Jr., *Competition Law and Patent Protection in Japan: A Half-Century of Progress, A New Millennium of Challenges*, 16 Colum. J. Asian L. 71, 79 (2002) (stating this requirement is found in Section 14b of Form 16. Section 24 of the Regulations under the patent act require that this “form of specification” be used.).

⁸⁶ *Id.*

⁸⁷ The Patents Act of 1949 provided that every complete specification “shall disclose the best method of performing the invention which is known to the applicant and for which he is entitled to claim protection.” The Patents Act of 1949 § 4(3)(b). The act also provided that the patent could be revoked for invalidity if “the complete specification does not sufficiently and fairly describe the invention and the method by which it is to be performed, or does not disclose the best method of performing it which was known to the applicant for the patent and for which he was entitled to claim protection.” *Id.* at § 32(1)(h); *see also* Anderegg, *supra* n. 75, at 223.

⁸⁸ M.A.L. Banks, Great Britain, The British Patent System: Report of the Committee to Examine the Patent System and Patent Law (1970).

⁸⁹ John Linneker, *Best Method Revocations Under the Patents Act 1949: C. van der Lely NV v. Rustons Engr. Co. Ltd*, 13 E.I.P.R. 423, 423-25 (1991).

⁹⁰ Patents Amendment Act 2002, Act No. 58-2002 (GA) (available at <http://www.polity.org.za/pdf/PatentsAA58.pdf> (accessed Mar. 31, 2005)). Section 32 of the Patents Act, 1978 was amended by the Patents Amendment Act 2002. The best method requirement in the complete specification was removed. The stated purpose of the amendment is “to amend the Patents Act, 1978, so as to bring certain provisions in line with the Agreement on Trade-related Aspects of Intellectual Property Rights; to bring provisions regarding the processing and amendment of applications under the Patent Co-operation Treaty in line with other applications; to effect technical corrections to some provisions and clarify others; to provide for non-infringement of a patent under certain circumstances; and to provide for matters incidental thereto.”

back on an enabling disclosure requirement.⁹¹ Similarly, Ireland abandoned the best mode provision in its 1992 Patents Act. Like England, Ireland dropped its best mode requirement in an apparent effort to facilitate easy entry into the EPC.

While the EPC does not explicitly mandate a best mode provision, it does not prohibit such a provision either. Given the fact that the best mode requirement is permitted under a more comprehensive international treaty relating to intellectual property rights, namely the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), dropping the requirement simply to conform to a regional convention that does not preclude it appears unnecessary, and perhaps retrogressive, absent an overriding public policy justification.

Indeed, the fact that the best mode requirement is more pervasive among nations now than ever before suggests that it should not be cast aside under the guise of conforming to international practice without a thorough examination of the underlying public policy implications. From a public policy standpoint, the best mode requirement has favorable implications at home and abroad. For the developing countries, the requirement provides a vehicle for the passing of technological information to the domestic companies more quickly than otherwise possible, thus to help build domestic technological infrastructure.

Clearly, at least some developing countries already recognize this. For example, Thailand adopted the requirement of best mode disclosure in their patent system in 1979 in order to foster the development of a technological base, and to assist in the acquisition of technologies from foreign countries.⁹²

Likewise, for the developed countries, the existence of the requirement also helps insure more rapid technological development through better disclosure in patents than would otherwise exist. As noted previously for companies from developed countries filing patent applications globally, the existence of the requirement in any one country causes the “beans to be spilled” regarding the best aspects of the invention quickly anyhow—particularly in the face of the harmonization trend in favor of early publication of patent applications.

⁹¹ *Id.* at § 1(b) (“[a] complete specification shall sufficiently describe, ascertain and, where necessary, illustrate or exemplify the invention and the manner in which it is to be performed in order to enable the invention to be performed by a person skilled in the art of such invention . . . ”).

⁹² Kuanpooth, *supra* n. 84.

B. Public Policy Considerations Abroad

Today there is a movement towards international substantive patent law harmonization. Countries should attempt to incorporate the best aspects of all the systems, rather than cling to their own national ways. Under this logic, the best mode requirement should not be cast aside simply because many countries do not require it. The fact that the best mode requirement does exist in a significant number of countries suggests that it has value. Moreover, in preliminary harmonization negotiations in favor of a Substantive Patent Law Treaty (SPLT), the U.S., Brazil, India and Mexico have supported requiring the provision of best mode.⁹³

In the international arena, the best mode requirement can further the objective of enhancing the viability of patent systems around the world by providing a uniform disclosure requirement across and among nations.⁹⁴ Additionally, the developing countries have long recognized the best mode requirement as a means to accomplish information exchange from the inventor to society, acting as a catalyst for promoting their national development.⁹⁵

Both developed and developing countries may be motivated to consider the opportunities that best mode affords in the substantive patent law negotiations. Recently, some of the developing countries have resorted to compulsory patent licensing as a way of providing forced technology transfer from developed to developing countries on the theory that the economic advancement at home can only occur through dissemination of knowledge domestically.⁹⁶ Typically the industrialized nations are not in

⁹³ Ian Karet, *Articles 5, 7, 10, and 16: The Patent Application, Amendments or Correction, Enabling Disclosures and Evidence ¶ 9* (AIPPI SPLT Seminar, Geneva, Jan. 29-30, 2004), http://www.aippi.org/splt/karet_paper.pdf (accessed Feb. 11, 2005) (referring to guidelines 38 and 39).

⁹⁴ Sabatelli & Rasser, *supra* n. 2, at 608.

The policy behind the best mode disclosure is that it advances international technology by requiring the inventor to provide the public with useful information for its technology base in exchange for the patent monopoly granted by the government. Therefore, the reluctance of the WIPO to require a best mode requirement accentuates the weakness of many foreign patent systems which provide the patent grant without requiring full disclosure by the inventor and ignores an important means of uniformly strengthening the patent systems of the world.

⁹⁵ Anderegg, *supra* n. 75, at 225.

⁹⁶ Gianna Julian-Arnold, *International Compulsory Licensing: The Rationales and the Reality*, 33 IDEA 349, 357 (1993). “[D]eveloping nations are generally strong advocates of maintaining a system which allows compulsory licensing, thereby limiting the scope of protection and rights available to foreign companies and individuals.”

favor of strong compulsory licensing provisions, presumably because it may presage a net outflow of technology to other countries.

One way to stem the tide of compulsory licensing is to provide an alternative pathway for information dissemination. Best mode is one such pathway. More specifically, developing countries are anxious to close what they perceive to be a critical technological gap between them and developed nations. In order to reduce this gap, developing countries perceive a need for maximum access to intellectual property of developed nations to enable them to use the information to facilitate their economic growth and independence.⁹⁷ Indeed, developing countries recognize the need to gain access to these new technologies to pursue economic growth, competitiveness, and independence. Because many developing countries seek to build a technology base through information exchange, the best mode requirement would provide the developing countries with an alternative to more drastic measures of forced technology transfer.⁹⁸ In this regard, the Committee on Transfer of Technology of the United Nations Committee on Transfer and Development (UNCTAD) has urged governments "to adopt measures, including IP rights protection and technical cooperation, to increase technology flows to developing countries and facilitate access of those countries to . . . new and advanced technologies."⁹⁹

Because patents provide a convenient vehicle for information dissemination, they serve as guideposts to the development of new technology. A vigorous patent system in a developing country that requires the publication of the full text of patents on new inventions facilitates the dissemination of the knowledge of recent technical developments. Such publication of patent documents serves to promote internal development in a developing country. As Anderegg predicted more than 25 years ago, there currently exists an increased awareness of the necessity of the best mode disclosure within a patent application, particularly in developing countries.¹⁰⁰ Ironically, although Great Britain does not itself require best mode disclosure, the British report of the Commission on Intellectual Property Rights has specifically recommended that "[d]eveloping countries should adopt the best mode provision to ensure that the patent applicant does not

⁹⁷ Alan S. Guterman, *The North-South Debate Regarding the Protection of Intellectual Property Rights*, 28 Wake Forest L. Rev. 89, 90 (1993).

⁹⁸ Paul Edward Geller, *An International Patent Utopia?*, 85 J. Pat. & Trademark Off. Socy. 582, 592 n. 52 (2003); see Jean Olson Lanjouw, *Beyond TRIPS: A New Global Patent Regime*, Ctr. for Global Dev. Brief Vol. 1, Issue 3 (August 2002) (available at <http://www.cgdev.org/Publications/?PubID=34> (accessed on Feb. 10, 2005)).

⁹⁹ Guterman, *supra* n. 97, at 121.

¹⁰⁰ Anderegg, *supra* n. 75, at 219.

withhold information that would be useful to third parties.”¹⁰¹ The report went on to further state that developing countries, because of the vast differences in their technical and scientific capacities, must choose an IP system that they feel best meets their development objectives and economic and social circumstances.¹⁰²

For the developing countries, the publication of patents containing the best mode would help accomplish the goal of these countries of technology inflow to their local markets. Inclusion of the best mode disclosure “provides a powerful training and educational tool for the local workforce.”¹⁰³ Without it, patent publications would be inadequate, and this would inhibit inventors from both the developed and developing countries sharing in the common pool of existing technology developed by others. This would turn out to be highly inefficient since it would force inventors to reinvent and redevelop technology that may otherwise be readily available via best mode disclosure.

In the end, without the best mode disclosure requirement, the educational value of patents will be severely restricted.¹⁰⁴ Further, the abolition of best mode could lead to exacerbation of the dichotomy between the developed and developing nations.

C. Role in Patent Harmonization

At present, international harmonization of substantive patent law is under consideration by the Standing Committee on the Law of Patents (SCP) of the World Intellectual Property Organization (WIPO). WIPO is currently discussing a draft of the SPLT.¹⁰⁵ WIPO has called for substantive harmonization because “trans-boundary research and the internationalization

¹⁰¹ *Integrating Intellectual Property Rights and Development Policy: Report of the Commission on Intellectual Property Rights* 117 (2d ed., London, Nov. 2002) (available at http://www.iprcommission.org/papers/text/final_report/reporthtmfinal.htm (accessed Feb. 18, 2005)).

¹⁰² *Id.* at 125.

¹⁰³ Guterman, *supra* n. 97, at 120.

¹⁰⁴ Le-Nhung McLeland & J. Herbert O'Toole, *Patent Systems in Less Developed Countries: The Cases of India and the Andean Pact Countries*, 2 J.L. & Tech. 229, 247 (1987).

¹⁰⁵ See generally 22nd Annual Trilateral Conference, 22nd Memorandum of Understanding on Trilateral Cooperation in the Field of Industrial Property, Alexandria, VA (Nov. 19, 2004). However, organizations representing intellectual property interests of industry in Europe, Japan and the U.S. (Industry Trilateral) have recently adopted a Resolution favoring a reduced scope for the patent law harmonization talks. Thus, it appears that the scope of SPLT may remain limited for sometime.

of production and trade" have resulted in a need for increased international patent protection.¹⁰⁶ The harmonization efforts were also spurred by the enactment of TRIPS, which in turn "expanded participation of developing countries in the global market, [encouraging] inventors in industrial countries to seek patents in those developing countries."¹⁰⁷ One of the issues discussed during patent harmonization efforts is whether to keep or eliminate best mode disclosure since it is a requirement that is not present in all patent systems.

In this regard, the fourth session of SCP included a discussion of whether to include best mode in further development of patent harmonization law, and SCP issued a report in December 2000 in which there was a mixture of support and opposition for the requirement. Opposition to the best mode requirement in the discussions was mainly based on the costs involved in compliance with the requirement and in defending infringement trials. By the ninth session of SCP, the split among countries favoring best mode and those opposing it was apparent.¹⁰⁸

In fact, the high cost of defending infringement actions based on best mode has often been raised as a reason to eliminate the requirement. Several domestic and international intellectual property associations have explicitly advocated the abolishment of the best mode requirement because of alleged high costs associated with it.¹⁰⁹ For example, the International Federation of

¹⁰⁶ WIPO, *Assemblies of the Member States of WIPO: Thirty-Seventh Series of Meetings Geneva, September 23 to October 1, 2002, WIPO Patent Agenda: Options for Development of the International Patent System, Annex 1* (available at http://www.wipo.int/documents/en/document/govbody/wo_gb_ab/index_37.htm (accessed April 6, 2005)).

¹⁰⁷ Toshiko Takenaka, *The Best Patent Practice or Mere Compromise? A Review of the Current Draft of the Substantive Patent Law Treaty and a Proposal for a "First-to-Invent" Exception for Domestic Applicants*, 11 Tex. Intell. Prop. L.J. 259, 262 (2003).

¹⁰⁸ Karet, *supra* n. 93 (Karet observed that the "USA, Brazil, India and Mexico are in favour of providing the best mode. However the majority of delegations are against it.").

¹⁰⁹ Among the domestic and international intellectual property associations that have called for elimination of the best mode disclosure are: Intellectual Property Owners Association, American Intellectual Property Law Association, and Federation of Industrial Property Attorneys. See IPO, *IPO Position on WIPO SCP Patent Harmonization: A Paper Prepared by IPO in Search of a Domestic Consensus on Patent Harmonization* 5 (June 5, 2001) (available at http://www.ipo.org/Content/ContentGroups/Legislative_and_International_Issues/IPPO_Position_Statements1/4242IPO_Statement.doc (accessed Mar. 31, 2005)); AIPLA, *AIPLA Response to the National Academies Report entitled "A Patent System for the 21st Century"* 33 (available at http://www.aipla.org/Content/ContentGroups/Issues_and_Advocacy/Comments2/Patent_and_Trademark_Office/2004/NAS092304.pdf (accessed Mar. 31 2005)); WIPO, *Standing Committee on the Law of Patents: Fourth Session Geneva, November 6 to 10,*

Industrial Property Attorneys (FICPI) opposes the best mode requirement, claiming that the best mode requirement “forced applicants to draft very lengthy specifications with very detailed information, even on aspects which were not necessarily related . . . to the inventive concept.”¹¹⁰ This is said to be an important contributor to rising costs.¹¹¹

FICPI has further argued that a straightforward enablement requirement would be sufficient to establish the necessary balance between patent holders’ and third parties’ rights.¹¹² Similarly, the International Association for the Protection of Industrial Property (AIPPI) also opposes the best mode requirement because it “only results in more complicated infringement trials [and] it does not result in better patents.”¹¹³

Selinger believes that the costs of litigating best mode have been overstated.¹¹⁴ All litigation is costly. Even in the absence of a best mode dispute, routine discovery in patent litigation will almost inevitably encompass facts pertinent to best mode analysis. Therefore, if best mode is eliminated, no material cost saving will be achieved during discovery.¹¹⁵

Adoption of a uniform system of best mode disclosure as a result of harmonization negotiations would result in a decrease in the costs of compliance. Furthermore, the wider adoption of the best mode requirement abroad will make patent filings more efficient by providing a more universal standard disclosure requirement to be considered in the filing of patent applications.

Because American inventors already operate under a best mode requirement, they have learned to live with it. Broader adoption of the requirement abroad would have no material effect on them. Further, since many multi-national foreign patent holders tend to file in the U.S., they are already bound by the best mode requirement and would not be adversely impacted by a more comprehensive adoption of the standard abroad.

¹¹⁰ 2000 9 (available at http://www.wipo.int/scp/en/documents/session_4/pdf/scp4_6.pdf (accessed Feb. 10, 2005)) [hereinafter Standing Committee].

¹¹¹ Standing Committee, *supra* n. 109, at 9.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ Leo Steenbeek, *Comments of AIPPI on Rules 5 and 6 PCT*, http://www.aippi.org/reports/q170/submit_wipo_electronic_forum.html (accessed Feb. 10, 2005).

¹¹⁵ Selinger, *supra* n. 22, at 1100 (criticizing a 1992 Advisory Commission Report on Patent Law Reform to the Secretary of Commerce involving a cost-benefit analysis of the best mode requirement).

¹¹⁵ *Id.* at 1101.

IV. CONCLUSION

Best mode disclosure should not be a bargaining chip that the U.S. is willing to sacrifice during international harmonization efforts since that would undermine the functioning of the domestic patent system, increase technology development costs to society and consumers, and result in a weakened regimen of patent protection. Rather, the harmonization efforts should accommodate the needs of developed and developing countries, both of which stand to gain from the enhanced quality and character of disclosure that is catalyzed by the existence of the best mode requirement. Such enhanced disclosure will stimulate a higher level of inventiveness than would otherwise exist—to the benefit of all concerned states. To that end, countries that do not currently have a best mode requirement in place should consider implementing one, for the benefit of their domestic industries. Broadened implementation will help improve the quality of patents when viewed from a global perspective. Such a result will benefit both patent holders and society as a whole.