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## Best Mode Concealment and Inequitable Conduct in Patent Procurement: A Nutshell, a Review of Recent Federal Circuit Cases and a Plea for Modest Reform

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## ARTICLES

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### BEST MODE CONCEALMENT AND INEQUITABLE CONDUCT IN PATENT PROCUREMENT: A NUTSHELL, A REVIEW OF RECENT FEDERAL CIRCUIT CASES AND A PLEA FOR MODEST REFORM\*

Donald S. Chisum†

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## I. INTRODUCTION

The best mode and duty of candor (inequitable conduct) requirements for obtaining United States patents serve laudable objectives but share common problems.

These full disclosure requirements are attractive from a policy perspective. Who can argue against "truth in patents"? To obtain valuable intellectual property rights in new technology, it is commonsensical that inventors and companies ought to be required to reveal to the public the preferred implementations of their inventions<sup>1</sup> and should disclose to the patent granting agency (the Patent and Trademark Office) information that is material to the patentability of an invention. But the requirements have, in practice, greatly complicated the process of obtaining U.S. patents and injected substantial uncertainty into patent enforcement.

A best mode or inequitable conduct violation results in the sanction of nullity, the death sentence for a patent on an invention that is otherwise a commercially valuable, novel, and nonobviousness technological achievement. A violation provides a complete defense

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1. This is not to say that there are no legitimate policy issues about the scope and depth of the duty to disclose the technological details surrounding an invention for which a patent is sought. Given that a patent is a "deal" between an inventor and society, the inventor giving disclosure, society giving limited term intangible property rights, there remains the question of how much disclosure is appropriate recompense for the rights. For example, suppose an inventor develops a whole new, complex medical diagnostic machine and seeks a patent claiming only a novel screen display feature of the machine. To require the inventor to disclose all the details of the entire machine and all the processes used to make it, even though a patent is only sought on a discrete part, would likely be considered by anyone to be bad policy. It would cause inventors to forego seeking patents, with the attendant public disclosure costs, and cause investors to channel their funds away from similar projects.

to an infringement action, no matter how egregious the infringer's conduct.

The requirements become "last resort" defenses for accused infringers who have weak technical defenses on infringement and patentability over the prior art. The courts impose heavy burdens of proof on best mode and inequitable conduct challenges, but the ability to raise plausible best mode or inequitable conduct defenses is made easier because the contours of the best mode and inequitable requirements: (1) are not precise, (2) are subject to continuing judicial interpretation, and (3) depend on facts and states of mind at precise points of time, usually many years before the date of litigation. Accused infringers may also prefer to rely on best mode or inequitable conduct violations because these defenses focus on human conduct and motivation rather than on complex technology and can thus lend themselves to a "try the person rather than the patent" strategy. Inequitable conduct is an attractive defense even to infringers who have strong invalidity or noninfringement defenses; the substantive defense may be sufficient to kill the patent, but a finding of inequitable conduct may enable an exonerated infringer to obtain a substantial award of attorney fees.

The best mode and inequitable conduct requirements are especially vexing for foreign inventors and companies who seek U.S. patents or face infringement charges for marketing products in the United States. First, the standards are virtually unique to U.S. law. Unlike other patent law standards, such as novelty and infringement, best mode and inequitable conduct have no counterparts in the major patent systems of Europe, Japan, and elsewhere. Second, determining compliance with the standards depends on information, including the knowledge and intent of particular individuals at particular points in time, that is not publicly accessible. Ordinarily, the information comes to light, and becomes available as a means for attacking the validity and enforceability of a patent, only as a result of the intrusive discovery rules under U.S. litigation procedure.

This Article sets forth a general summary of the law on best mode<sup>2</sup> and inequitable conduct<sup>3</sup> together with some recent (1996) Federal Circuit case examples,<sup>4</sup> which illustrate the impact of these doctrines and the fine distinctions that the courts draw in applying them. It concludes with a plea for "modest reform," that is, ways

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2. See *infra* Part II.A. (summarizing best mode).

3. See *infra* Part III.A. (summarizing inequitable conduct).

4. See *infra* Parts II.B and III.B.

short of a wholesale overhaul of the patent system that these requirements might be reformed to preserve the policies they serve but reduce the uncertainty and expense that these doctrines impose on the procedures for procuring and enforcing patents.

## II. BEST MODE REQUIREMENT

### A. Summary

The specification of a patent must set forth the "best mode contemplated by the inventor of carrying out his invention."<sup>5</sup> The purpose of the best mode requirement is to prevent inventors from obtaining patent protection while concealing from the public preferred embodiments of their inventions.<sup>6</sup>

Determining a best mode violation involves two factual inquiries. First, did the inventor have, at the time the patent application was filed, a best mode of practicing the claimed invention? This is a subjective inquiry, which focuses on whether the inventor in fact had a preference. Second, did the specification adequately disclose the inventor's best mode so that one of ordinary skill in the art could practice the mode? This is an objective inquiry, which focuses on what the specification discloses, the scope of the claimed invention, and the level of skill in the art.<sup>7</sup>

#### 1. Best Mode Distinguished from Enablement

A best mode violation can cause a patent claim to be invalid even though the patent provides an enabling disclosure. For example, in one case, two patents on gas lasers, one on an improved laser discharge tube with copper cups attached by "brazing" to a ceramic tube's inside wall and one on a method of fabricating the tube with cups, were held invalid because the patentee failed to set forth specific information on the preferred brazing method (TiCuSi, copper silver eutectic with titanium-active metal brazing involves six stages).<sup>8</sup> The six stage brazing cycle was not disclosed in either the

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5. 35 U.S.C. § 112 (1988).

6. *In re Gay*, 309 F.2d 769, 772 (C.C.P.A. 1962).

7. *United States Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209, 1212 (Fed. Cir. 1996); *Chemcast Corp. v. Arco Indus.*, 913 F.2d 923, 926 (Fed. Cir. 1990).

8. *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524 (Fed. Cir. 1987).

[C]ompliance with the best mode requirement focuses on a different matter than does compliance with the enablement requirement. Enablement looks to placing the subject matter of the claims generally in the possession of the public. If, however, the applicant develops specific instrumentalities or techniques which

patent or the prior art. The patents met the enablement requirement because they adequately disclosed an alternative brazing method.

## 2. Multiple Claims

If a patent contains multiple claims, the best mode analysis is conducted on a claim-by-claim basis, and a violation as to one claim will not necessarily invalidate other claims in the patent.<sup>9</sup>

## 3. Subjective Standard — Intent to Conceal — Inequitable Conduct

The “mode” that must be disclosed is not the best in fact but rather the one believed to be best by the inventor. The fact that the inventor (or his assignee) subsequently adopts a mode for commercial production that differs from that disclosed in the specification does not necessarily mean that there has been a violation of the best mode requirement.<sup>10</sup>

Some Federal Circuit decisions suggest that there must be evidence of the inventor’s “intent to conceal” the best mode,<sup>11</sup> but other decisions reject such suggestions, holding that “[a] best mode violation may occur if the disclosure of the best mode is so objectively inadequate as to effectively conceal the best mode from the public.”<sup>12</sup>

If a best mode violation is intentional, it can be deemed inequitable conduct, resulting in unenforceability of the entire patent and other adverse consequences, such as an award of attorney fees against the patent owner or the unenforceability of other related patents.<sup>13</sup>

are recognized at the time of filing as the best way of carrying out the invention, then the best mode requirement imposes an obligation to disclose that information to the public as well.

*Id.* at 1532.

9. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 n.5 (Fed. Cir. 1991) (“Absent inequitable conduct, a best mode defense only affects those claims covering subject matter the practice of which has not been disclosed in compliance with the best mode requirement.”).

10. *Texas Instruments Inc. v. United States Int’l Trade Comm’n*, 871 F.2d 1054, 1061 (Fed. Cir. 1989); *Benger Lab., Ltd. v. R.K. Laros Co.*, 209 F. Supp. 639, 644-45, (E.D. Pa. 1962), *aff’d*, 317 F.2d 455 (3d Cir. 1963), *cert. denied*, 375 U.S. 833 (1963).

11. *E.g.*, *Engel Indus. v. Lockformer Co.*, 946 F.2d 1528, 1532 (Fed. Cir. 1991); *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384-85 (Fed. Cir. 1986):

Because not complying with the best mode requirement amounts to concealing the preferred mode contemplated by the applicant at the time of filing, in order to find that the best mode requirement is not satisfied, it must be shown that the applicant knew of and concealed a better mode than he disclosed.

12. *United States Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209, 1215 (Fed. Cir. 1996). *Accord Graco, Inc. v. Binks Mfg. Co.*, 60 F.3d 785, 789-90 (Fed. Cir. 1995).

13. *Consolidated Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.2d 804, 807-15 (Fed. Cir.

#### 4. Assignee and Inventor—Non-U.S. Applicants

The best mode statute refers to the best mode contemplated by "the inventor." Often, in patent law, when the human inventor assigns patent rights — usually to his or her employer — the assignee is deemed to assume the inventor's obligations. However, the *Glaxo* decision applied the best mode requirement literally, finding no violation when the inventor's assignee preferred a specific process for converting the patented compound into a pharmaceutical composition but the actual inventor had no knowledge of the process.<sup>14</sup> The majority noted that there would be no violation even if the assignee had deliberately "walled off" the inventor. A dissenting judge argued that "if there truly was . . . a pattern of deliberate concealment of information that would otherwise have been known to the inventor, the knowledge of those who sought to conceal that information and who now attempt to enforce the patent may be imputed to the inventor."<sup>15</sup>

The *Glaxo* holding saved a patent covering an extremely valuable pharmaceutical product, but the close vote and the circumstances suggest that a corporate assignee would not be well advised to deliberately conceal a preferred mode by keeping the human inventor ignorant of the facts and omitting the mode from the patent specification.

*Glaxo* illustrates the difficulties that non-U.S. inventors and companies face in pursuing U.S. patents. The intricate best mode disclosure requirement is unique to the United States, but, to establish a right of priority in the United States, an applicant filing an application in another country must fully comply with U.S. disclosure requirements, including the best mode requirement. This means that an applicant who intends to pursue patent rights in the United States must, before filing a priority application in his or her own country, predict, what must be disclosed to comply with the U.S. best mode requirement. In *Glaxo*, the assignee initially filed in Great Britain and deliberately omitted reference to the preferred process for converting the compound into a pharmaceutical composition based on its patent officer's prediction that the U.S. best mode requirement would not require disclosure of the process so long as the application contained only claims to the compound and not to compositions or thera-

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1990) (related patents are unenforceable because of the patentee's inequitable conduct consisting of the substitution in one patent's specification of a fictitious, inoperable mode for the patentee's contemplated best mode).

14. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1050 (Fed. Cir. 1995).

15. *Id.* at 1056 (Mayer, J., dissenting).

peutic methods.<sup>16</sup> This advice may or may not have been accurate, but, years later, the patent escaped a best mode violation for a different reason (no personal knowledge by the inventor), which the assignee most likely did not foresee.<sup>17</sup>

### 5. Time Frame — Continuation Applications

The critical time period for determining compliance with the best mode requirement is the application filing date.<sup>18</sup> An inventor need not amend an application to add a best mode discovered after the filing date. If an inventor files an application promptly after preparation, he will avoid the risk that a specific better mode will be developed at some point after the preparation of an application but before filing.

An inventor may discover a new best mode between the filing of one application and the filing of a subsequent application that relies for priority on the filing date of the previous application.<sup>19</sup> In *Transco*, the Federal Circuit held that an applicant need not “update” the best mode disclosure when filing a continuation application that contains no new matter and that “the date for evaluating a best mode disclosure in a continuing application is the date of the earlier application with respect to common subject matter.”<sup>20</sup> The court cited earlier case authority that “in the context of a priority claim under 35 U.S.C. § 119, one looks to the foreign application and its filing date to determine the adequacy of the best mode disclosure and not to the filing date of the corresponding U.S. application.”<sup>21</sup>

### 6. Disclosure Adequacy — Trade Secrets

If the inventor contemplates a best mode on the filing date, the specification must contain a description of that mode sufficient to enable a person of ordinary skill in the art to practice the preferred mode.<sup>22</sup>

16. *Id.* at 1046.

17. *Id.* at 1052.

18. *Carter-Wallace, Inc. v. Riverton Lab., Inc.*, 433 F.2d 1034, 1038 (2d Cir. 1970).

19. One situation would be the filing of an application in another country and a filing in the United States within one year. Another situation would be the filing of one application in the United States and the later filing of a continuation or continuation-in-part application.

20. *Transco Prods. Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 557 (Fed. Cir. 1994).

21. *Id.* at 558.

22. *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1532 (Fed. Cir. 1987) (“Even though there may be a general reference to the best mode, the quality of the disclosure may be



If the inventor prefers a specific material or process for use with the invention, the specification must disclose it; it is not sufficient that the material or process is known in the prior art or is commercially available.<sup>23</sup> On the other hand, if the inventor does disclose the best mode in some fashion, the state of the prior art must be considered in determining whether the disclosure is adequate.<sup>24</sup>

To be adequate, a best mode disclosure need not necessarily enable the public to duplicate *exactly* the patentee's preferred implementation of the invention.<sup>25</sup> For example, in *Amgen*, the patent claimed cells transformed with DNA to encode production of erythropoietin (EPO). The inventor's best mode of practicing the claimed invention was a specific Chinese hamster ovary (CHO) cell line, developed with a technique — gene amplification — that multiplied the cells' copies of the gene and, therefore, their ability to produce EPO. In his patent specification, the inventor identified the CHO cell line and the method of making it but did not deposit the preferred cell line with a public depository. The court found no best mode violation even though, without access to the inventor's cell line, one could not exactly duplicate it. "What is required is an adequate disclosure of the best mode, not a guarantee that every aspect of the specification be precisely and universally reproducible."<sup>26</sup>

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so poor as to effectively result in concealment.").

23. *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 940 (Fed. Cir. 1990) (a patent required use of a magnetic tape cassette and stated that cassettes that "are almost universally available for audio purposes" were suitable; before filing the application, the inventor purchased special cassettes that had better strength and magnetic characteristics than standard tapes; the assignee argued that cassettes of the specified quality were commercially available when the patent application was filed; "If so, it is this tape (or [the assignee's] own specifications) that had to be disclosed to satisfy the best mode requirement."; "While [the assignee's] argument may be relevant to enablement, it does not establish the best mode 'contemplated by the inventor,' which is a subjective inquiry."); *Dana Corp. v. IPC Ltd. Partnership*, 860 F.2d 415, 418-19 (Fed. Cir. 1988).

24. *Chemcast Corp. v. Arco Indus.*, 913 F.2d 923, 927 (Fed. Cir. 1990). *See also* *Randomex, Inc. v. Scopus Corp.*, 849 F.2d 585, 589-90 (Fed. Cir. 1988) (a patent that claimed a portable computer disk cleaning apparatus and disclosed by trade name (not formula) the patentee's proprietary brand of cleaning fluid for use with the apparatus indiscriminately with other less satisfactory cleaning fluids satisfied the best mode requirement because: (i) the patent described the brand as a "non-residue detergent solution," (ii) commercial substitutes were readily available, and (iii) the accused infringer easily "reverse engineered" the patentee's cleaning fluid).

25. *See, e.g., Fonar Corp. v. General Elec. Co.*, 41 U.S.P.Q.2d (BNA) 1801, 1805 (Fed. Cir. 1997) (stating the functions of the best mode software satisfies the description test and do not need to give actual source code of software); *In re Sherwood*, 613 F.2d 809, 816-17 (C.C.P.A. 1980), *cert. denied*, 450 U.S. 994 (1981) (no need to set forth a known computer program suitable for carrying out a claimed process if a skilled programmer could readily prepare such a program).

26. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1212 (Fed. Cir. 1991). *See also*

That an inventor's preferred material comes from an outsider supplier who claims trade secret rights in the material does not excuse the inventor from disclosing the material.<sup>27</sup> If an inventor does not know a preferred material's composition or method of manufacture, he must, at a minimum "provide supplier/trade name information in order to satisfy the best mode requirement."<sup>28</sup>

### 7. Claimed Invention — Production Specifications

The "best mode" concerns the invention as defined by the patent's claims. Neither the statute nor the case law defines precisely the relationship between the mode and the claimed invention.<sup>29</sup> The best mode requirement includes not only a preferred embodiment or example of the claimed invention but also unclaimed but preferred materials and processes for making an embodiment.<sup>30</sup> The extent to which the requirement includes contemplated uses of the invention is not clear.<sup>31</sup>

*Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1578 (Fed. Cir. 1991).

27. *Chemcast Corp. v. Arco Indus.*, 913 F.2d 923, 930 (Fed. Cir. 1990) ("Whatever the scope of [the supplier's] asserted trade secret, to the extent it includes information known by [the inventor] that he considered part of his preferred mode, section 112 requires that he divulge it."; "Whether characterizable as 'manufacturing data,' 'customer requirements,' or even 'trade secrets,' information necessary to practice the best mode simply must be disclosed.").

28. *United States Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209, 1214 (Fed. Cir. 1996). *Compare* *Transco Prods. Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 562 (Fed. Cir. 1994):

The district court has imposed on [the patentee] not only the burden of establishing that a skilled artisan would have understood what was needed to practice the best mode, but also the burden of establishing that the skilled artisan could actually have replicated or obtained the material needed to practice the best mode. Although there may be factual scenarios in which the latter burden would be reasonable, caution should be exercised in imposing such a burden. Otherwise, such a burden ultimately evolves into a per se rule that supplier/trade name information must be disclosed or that an application become a production specification, a result clearly contrary to law.

29. *Wahl Instruments v. Acvious, Inc.*, 950 F.2d 1575, 1579 (Fed. Cir. 1991) ("The words in the statute are not without ambiguity. This case illustrates that the term 'mode' and the phrase 'carrying out the invention' are not definable with precision.").

30. *Chemcast Corp. v. Arco Indus.*, 913 F.2d 923, 928 (Fed. Cir. 1990):

[M]ost of the cases in which we have said that the best mode requirement was violated addressed situations where an inventor failed to disclose non-claimed elements that were nevertheless necessary to practice the best mode of carrying out the claimed invention. *See, e.g., Dana*, 860 F.2d at 419 (failure to disclose unclaimed fluoride surface treatment that was necessary for satisfactory performance of claimed seal violated best mode); *Spectra-Physics*, 827 F.2d at 1536 (failure to disclose specific braze cycle constituting preferred means of attachment violated best mode even though no particular attachment means claimed).

31. In *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1049-50 (Fed. Cir. 1995), the ma-

An inventor need not disclose processes or materials that are preferred not because they make the invention technically superior but rather for commercial manufacturing convenience or for accommodating the needs of a particular supplier or customer.<sup>32</sup> An inventor is not required to supply "production" specifications."<sup>33</sup>

### B. Recent Case Examples

Two 1996 Federal Circuit decisions addressed the best mode requirement, one affirming a summary judgment that a patent was invalid, the other rejecting a best mode challenge. Both cases involved the fine line between "inventive preferences," which must be disclosed, and "commercial implementation," which need not be.

In *United States Gypsum v. National Gypsum*,<sup>34</sup> the patent concerned joint compounds, which are adhesives used to fill joints between gypsum wallboards. The inventor, Williams, an employee of the patentee, USG, conceived of using, as a filler in joint compounds, silicone-treated expanded perlite, which is pulverized, heat-expanded, porous lightweight volcanic ore treated with silicone to make it water insensitive. Williams experimented with Sil-32, supplied by Silbrico Corp., but found it unsatisfactory. Later, Silbrico sent Williams a sample of Sil-42. Williams did not know Sil-42's exact chemical composition, which Silbrico considered "proprietary," but discovered that it had size and other advantages. Because 99% of its particles were 100 mesh in size or smaller, it need not be screened before use in a joint compound. It "eliminated the coarse look of other light-

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jority noted but did not decide the issue whether, for patent claims to a compound, the inventor must disclose a preferred method for converting the compound into a pharmaceutical composition. Judge Mayer, dissenting, noted: "[T]he statutory language demands that the patent disclose the best mode of 'carrying out' the claimed invention . . . [T]his language encompasses not only modes of making the invention, but of using it as well." *Id.* at 1053 (Mayer, J., dissenting).

32. See, e.g., *Wahl Instruments v. Acvious, Inc.*, 950 F.2d 1575, 1581 (Fed. Cir. 1991) (a nondisclosed manufacturing process was "no more than a routine manufacturing choice selected because of expected volume of production and for reasons of cost" and "was, therefore, not a 'mode' of 'carrying out' the invention within the meaning of the statute."); the inventor selected a specific material for his commercial embodiment because it was cheaper for commercial production than the material disclosed in the patent; material selection for this type of process was within routine knowledge); *Christianson v. Colt Indus. Operating Corp.*, 822 F.2d 1544, 1563 (Fed. Cir. 1987), *vacated on other grounds*, 486 U.S. 800 (1988) (the patentee, in obtaining patents on various rifle parts, did not violate the best mode requirement by not providing production information sufficient to enable anyone to make parts interchangeable with military procurement specifications for M-16 rifles; the best mode requirement "has nothing to do with mass production or with sales to customers having particular requirements.").

33. See *Wahl*, 950 F.2d at 1580.

34. *United States Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209 (Fed. Cir. 1996).

weight fillers, resisted breakdown under vacuum treatment, and yielded a joint compound that was lightweight, easy to sand, and exhibited good non-cracking and adhesion properties."<sup>35</sup> USG decided to sell joint compound using Sil-42 perlite and to file a patent application.

Williams sent to USG's patent attorney formulations, all of which listed Sil-42 as a component. A USG executive instructed the attorney "to omit from the application any reference to Sil-42 or Silbrico Corporation. Subsequently, when the application was filed . . . , it did not refer to Sil-42 either by chemical formula, method of manufacture, trade name, or supplier."<sup>36</sup>

In USG's infringement suit against National Gypsum, the district court granted National's motion for summary judgment that the patent's claims were invalid because the inventor preferred Sil-42 on the filing date and the specification did not inform those skilled in the art how to make or otherwise obtain Sil-42.

The Federal Circuit affirmed, distinguishing prior decisions which suggested an inventor need not always identify preferred suppliers or sources.<sup>37</sup> First, the omitted information was a best mode, not a commercial preference. The inventor's "selection of Sil-42 perlite was not 'a routine manufacturing choice' made 'because of expected volume of production' or 'reasons of cost.'"<sup>38</sup> The inventor "selected Sil-42 perlite because it did not require screening and because it significantly improved the physical properties of the joint compound, not just because it was available in large quantities."<sup>39</sup> "In short, [the inventor] believed that Sil-42 perlite was essential to improving the invention; the material was not selected as a matter of commercial expediency."<sup>40</sup>

Second, there was inadequate disclosure of the best mode. If an inventor does not know a preferred material's composition or method of manufacture, he must, at a minimum "provide supplier/trade name information in order to satisfy the best mode requirement."<sup>41</sup> The specification defined "perlite as a rock that 'generally contains 65-75% SiO<sub>2</sub>, 10-20% Al<sub>2</sub>O<sub>3</sub>, 2-5% H<sub>2</sub>O, and smaller amounts of

35. *Id.* at 1211.

36. *Id.*

37. See text accompanying *supra*, note 24.

38. *United States Gypsum*, 74 F.3d at 1213.

39. *Id.*

40. *Id.*

41. *United States Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209, 1214 (Fed. Cir. 1996).

soda, potash, and lime,"<sup>42</sup> but "that is not a description of Sil-42 silicone-treated expanded perlite, which consists of a proprietary blend of perlite ores coated with an unknown silicone compound."<sup>43</sup> That Sil-42 was another party's trade secret "does not excuse compliance with the best mode requirement."<sup>44</sup> The patentee "contends, nonetheless, that those of ordinary skill in the art would have known how to obtain 100 mesh silicone-treated expanded perlite because Sil-42 perlite was commercially available," but "[t]he evidence indicates . . . that the material was not well-known in the art in December 1982 [when the patent application was filed]."<sup>45</sup> A patentee "cannot cure its failure to disclose the best mode of practicing the invention at the time the application was filed by later selling a commercial product embodying the invention."<sup>46</sup> "More fundamentally, even though Sil-42 perlite was sold commercially, the [patent's] specification does not disclose it and, at the time . . . the application was filed, no one in the art except Williams and USG knew that Sil-42 perlite should be used in a joint compound."<sup>47</sup>

In *Zygo Corp. v. Wyko Corp.*,<sup>48</sup> the "mode" in question was clearly preferred and was not adequately disclosed, but the court found no best mode violation because the "mode" concerned only "a particular embodiment, a commercial mode for a particular type of use of the claimed invention."<sup>49</sup> The patent concerned an interferometer. Before filing its application, the patentee made "a commercial embodiment which encased the interferometer in a box"<sup>50</sup> for which "it was necessary to add an illumination mirror and a spherical field lens."<sup>51</sup> The patent's specification only disclosed the interferometer "without any enclosure together with the add-ons thereby made necessary."<sup>52</sup> The court candidly noted that "The phrases 'best mode' and 'carrying out the invention' are not statutorily defined. What is a 'mode' of the 'invention'? What acts or ideas are meant to be encompassed by the phrase 'carrying out the invention'? These

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42. *Id.*

43. *Id.*

44. *Id.*

45. *Id.*

46. 74 F.3d at 1215.

47. *Id.*

48. *Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563 (Fed. Cir. 1996).

49. *Id.* at 1567.

50. *Id.*

51. *Id.* at 1565.

52. *Id.*

questions are not answered by a mechanical rule.”<sup>53</sup> The best mode requirement does not focus on “what a particular user decides to make and sell or even in what field the invention is most likely to find success. Rather, in keeping with the statutory mandate, our precedent is clear that the parameters of a section 112 inquiry are set by the *claims*.”<sup>54</sup>

Here, the claimed invention is an interferometer system which has a number of applications. The inventors disclosed the mode for carrying out that claimed invention: a light source, beam splitters, various optical elements, a diffuse screen with a reticle, a camera, and a monitor arranged in a particular manner . . . . [T]he disclosure is adequate to enable one of skill in this art to practice the invention of the *claims* . . . . [I]nterferometers can function and are used commercially without an enclosure. The only argument is that the hardware added to make Zygo’s enclosed commercial embodiment should have also been disclosed. That argument must be rejected. Because the claims simply do not require packaging of any sort, the failure to disclose the enclosure is not a violation of section 112.

With respect to the subject matter of the claims, an enclosed mode may or may not be “best” for a particular commercialization. But it is clear that an enclosure is not a necessary part of this invention and there is no evidence that either inventor considered an enclosed interferometer to be the best mode of carrying out the invention.<sup>55</sup>

In *Minco Inc. v. Combustion Engineering, Inc.*,<sup>56</sup> the Federal Circuit reiterated the subjective portion of the best mode requirement in that the inventor’s intent controls when making a determination of compliance with the best mode requirement. The Federal Circuit relied on *Transco*<sup>57</sup> in stating that to invalidate a patent for a best mode violation, an accused infringer must show by clear and convincing evidence that the inventor “both knew of and concealed a better mode of carrying out the claimed invention than was set forth in the specification.”<sup>58</sup> In *Minco*, the claims at issue were directed to a crane support on the housing and detachable extension of a rotary furnace used to produce fused silica used in semiconductor technology. At

53. *Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563, 1567 (Fed. Cir. 1996).

54. *Id.*

55. *Id.* at 1567-68.

56. *Minco Inc. v. Combustion Eng’g, Inc.*, 95 F.3d 1109 (Fed. Cir. 1996).

57. *Transco Prods. Inc. v. Performance Contracting, Inc.*, 38 F.3d 551 (Fed. Cir. 1994).

58. *Id.* at 560.

issue was whether Minco's crane support configuration was a production decision as opposed to a "best mode" or superior method of operation. Minco opted to use a new two crane support system because it had added more wheels to its drive system. The court applied the standard of one with ordinary skill in the art in finding that the number of drive wheels varies according to the type of mineral in the furnace and wheels were added to facilitate different minerals. In adding wheels, to facilitate different minerals, *Minco* could not locate a crane support as disclosed in the drawings of the patent application. The Federal Circuit upheld on appeal that the evidence showed that Minco did not appreciate that the mode at issue was better than the mode which was disclosed at the time of filing. As such, no best mode violation was found.

In *Great Northern Corp. v. Henry Molded Products*,<sup>59</sup> the Federal Circuit held a patent which disclosed a structure for protectively supporting and spacing rolls of web material in a multi-layer stack invalid for failure to disclose the best mode. Great Northern is the assignee of a patent which encompasses elongated bars of expanded foam material with multiple recesses which may be used to support rolls of material such as cellophane or steel. Great Northern initially marketed the ROLLGUARD product embodying the patented invention, and later developed an improved version, ROLLGUARD II, which had a molded pump roll support. Henry Molded Products also developed a molded pump roll support called the STAKKER and received a patent thereon. Great Northern filed suit against Henry Molded for patent infringement alleging the STAKKER infringed its earlier filed patent. Henry Molded counterclaimed alleging Great Northern's ROLLGUARD II infringed the STAKKER patent. In the district court trial for patent infringement, a jury found that Henry Molded's STAKKER product did not infringe and that claim 1 of the Henry Molded patent which encompassed the STAKKER was invalid for a best mode violation. More specifically, Great Northern charged that Henry Molded did not disclose the use of diamond-shaped indentations (or ribs) which provide strength to the molded pulp of the claimed roll support, and, this amounted to a failure to disclose the best mode known to them at the time of filing.

In previous decisions, the Federal Circuit has distinguished the best mode of practicing the invention from "production details."<sup>60</sup> Commercial considerations such as equipment on hand, or prior rela-

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59. *Great Northern Corp. v. Henry Molded Prods.*, 94 F.3d 1569 (Fed. Cir. 1996).

60. *Id.* at 1572.

tionships with suppliers which were satisfactory<sup>61</sup> have not been held to constitute a best mode because they “do not relate to the quality or nature of the invention.”<sup>62</sup> The term “production details” has been used by the court to refer to details which “do relate to the quality or nature of the invention (and may therefore be a best mode) but which need not be disclosed because they are routine.”<sup>63</sup>

Henry Molded argued that because the diamonds were added during production, they were merely a production detail as opposed to a best mode. Contrary to such contentions, the record clarified that at a minimum the STAKKER products designed to support large-diameter rolls could not be produced without the diamonds demonstrating that they were critical to practicing the invention rather than simply a commercial consideration. The Federal Circuit also dismissed Henry Molded’s argument that “those of ordinary skill would have known to employ such diamonds even without explicitly being told to do so.” The argument was raised for the first time on appeal, leading the Federal Circuit to hold that “we can only conclude that Henry Molded chose not to litigate this issue at trial and therefore waived it.”<sup>64</sup>

In *Applied Materials Inc. v. Advanced Semiconductor Materials America*,<sup>65</sup> in an unusual voting pattern, a majority of a three-judge panel of the Federal Circuit held that claims in a patent issuing on a continuation-in-part application (CIP) were not entitled to the benefit of a parent application’s filing date. Therefore, the claims were invalid because of a public use and sale occurring more than one year before the CIP filing date. However, the two judges in the majority relied on different disclosure violations. Chief Judge Archer found an enablement or written description failure, and Judge Mayer found a best mode failure. Judge Mayer reasoned that the parent application:

may have enabled one of ordinary skill in the art to practice the claimed process . . . [but] only the . . . continuation-in-part disclosed the advantages of the . . . process and specifically claimed it as the invention. In the interval, the inventors had developed [an apparatus] that would optimize the advantages of this feature. To

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61. See, e.g., *Wahl Instruments v. Acvious, Inc.*, 950 F.2d 1575 (Fed. Cir. 1991) and *Transco Prods. Inc. v. Performance Contracting, Inc.*, 38 F.3d 551 (Fed. Cir. 1994).

62. *Great Northern Corp.*, 94 F.3d at 1572.

63. *Id.* at 1569, 1572.

64. *Id.* at 1573.

65. *Applied Materials Inc. v. Advanced Semiconductor Materials Am.*, 98 F.3d 1563 (Fed. Cir. 1996).



allow them to take advantage of the [parent application's] 1969 filing date almost 7 years later, add new matter to their application, and not require them to disclose the best mode of the newly claimed invention is a gross distortion of the bargain between the inventor and the public.<sup>66</sup>

Judge Mayer distinguished *Transco*.

[A] continuation application, which was at issue in *Transco*, is fundamentally different from a continuation-in-part, which is at issue here . . . .

. . . .

*Transco* held that "an application is entitled to the benefit of the filing date of an earlier application as to common subject matter . . . Applied to the best mode requirement, this narrow statement means that an applicant is not required to update the best mode disclosure for continuation applications, which, of course, add no new matter, or for inventions claimed in continuation-in-part applications that are otherwise entitled to the filing date of a parent application because they meet all requirements necessary to gain the benefit of the earlier filing date. However, *Transco's* general discussion of "continuing" applications should not be thought to apply the same requirements to both types of "continuing" applications without considering the important differences between them. Both continuations and continuations-in-part may be referred to as "continuing" applications for some purposes, but they are different in important respects.<sup>67</sup>

Dissenting, Judge Newman decried the new burdens that the majority judges' separate theories would impose on patent applicants.

[T]his court in *Transco* explained that when the claims are entitled to the filing date of the parent application, they do not lose that entitlement when carried forward in a refiled application, whether that application is a Rule 60 "continuation" or a continua-

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66. 98 F.3d at 1581. Judge Mayer argued that:

If an inventor may file a patent application disclosing only part of an invention, and then file a continuation-in-part adding substantial new matter without disclosing the best mode of what was newly added, the public will be deprived of the full invention claimed in the continuation-in-part application. It would behoove inventors to disclose only minimal parts of their inventions, and then submit continuations-in-part to claim the rest. They could thereby hide the commercial value that resides in the best mode of practicing their inventions and gain the benefit of both the exclusionary right of the patent and the "quasi-trade secret" of the best mode.

67. 98 F.3d at 1579.

tion-in-part . . . .

However, when claims in the continuation-in-part require the newly added matter for enablement, the best mode is measured as of the filing date governing those claims . . . .

. . . .

It appears that the district court had been persuaded that [the applicant-patentee] was required to include all subsequently developed aspects of its commercial apparatus, whether or not they were part of the invention claimed in the . . . patent. That is not the law . . . .

Prior to the uncertainties now raised by my concurring colleagues, each of whom imposes a different new obligation upon patent applicants, the law was that when the original specification is enabling, the best mode as to claims enabled by the original subject matter is measured as of the original filing date. When an application is refiled with newly added matter, the initial matter does not thereby lose its effective date, and claims that were initially enabled, and a specification that initially met the best mode requirement, do not lose their validity as to the common subject matter.<sup>68</sup>

### III. DUTY OF CANDOR — INEQUITABLE CONDUCT

#### A. Summary

Patent applicants have a duty to disclose to the PTO information of which they are aware that is material to the examination and to refrain from making misrepresentations or falsifying facts.<sup>69</sup> Violation of this duty of candor is referred to as inequitable conduct.

#### 1. Materiality

The duty of disclosure extends to information and prior art that is material. The duty of disclosure may arise with respect to:

(1) public use and on sale activity by the inventor and his assignee that may constitute a statutory bar;<sup>70</sup>

68. 98 F.3d at 1582.

69. 37 C.F.R. § 1.56. The oath or declaration submitted with a patent application must contain an acknowledgment of the duty of disclosure.

70. See, e.g., *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1192 (Fed. Cir. 1993); *LaBounty Mfg., v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1074 (Fed. Cir. 1992); *Argus Chem. Corp. v. Fibre Glass-Evercoat Co.*, 759 F.2d 10, 14 (Fed. Cir. 1985), *cert. denied*, 474 U.S. 903. Cf. *Reactive Metals & Alloys Corp. v. ESM, Inc.*, 769 F.2d 1578, 1583 (Fed. Cir. 1985).

(2) prior art references of which the examiner may not be aware that are more pertinent than those considered by the examiner;<sup>71</sup>

(3) testing and other data submitted in support of patentability;<sup>72</sup> and

(4) affidavits establishing a pre-filing date of invention.<sup>73</sup>

A false statement that may influence an examiner's decision to grant a petition to make special (i.e., expedite examination) is material even if it does not relate directly to the issue of patentability over the prior art. In *General Electro Music*, the court held that a patent applicant's attorney's statement that he had conducted a "prior art search" was both material and intentionally false.<sup>74</sup> "By filing a petition to make special, [the patentee] . . . requested special treatment and induced reliance on its statement that a prior art search had been conducted. [It] cannot now argue that that statement was immaterial."<sup>75</sup>

#### a. Reasonable Examiner Standard

From 1977 to 1992, the PTO rule on the duty of disclosure, Rule 56, provided that "information is material where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent."<sup>76</sup>

71. See, e.g., *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1184-85 (Fed. Cir. 1995); *J.P. Stevens & Co. v. Lex Tex, Ltd.*, 747 F.2d 1553, 1562 (Fed. Cir. 1984). Cf. *B.F. Goodrich Co. v. Aircraft Braking Sys.*, 72 F.3d 1577, 1584 (Fed. Cir. 1996).

72. *Rohm & Hass Co. v. Crystal Chem. Co.*, 722 F.2d 1556, 1570-71 (Fed. Cir. 1983), later proceeding, 736 F.2d 688 (Fed. Cir. 1984). Cf. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1048 (Fed. Cir. 1995). An affidavit offering test data constitutes representation by the applicant that the showing is a fair and accurate representation of the closest prior art of which he is aware. *Norton v. Curtis*, 433 F.2d 779, 794 (C.C.P.A. 1970).

73. *Timely Prod. Corp. v. Arron*, 523 F.2d 288 (2d Cir. 1975).

74. *General Electro Music Corp. v. Samick Music Corp.*, 19 F.3d 1405 (Fed. Cir. 1994).

75. 19 F.3d at 1411.

76. 37 C.F.R. § 1.56 (1977-1992). Before 1977, Rule 56 referred only to "striking" applications in connection with which any "fraud" was practiced. 37 C.F.R. § 1.56 (1976). The 1977 amendment stated a positive duty to disclose material information. 37 C.F.R. § 1.56 (1977).

In assessing the conduct of patent attorneys and inventors in prosecutions before 1977, court decisions differ on whether the 1977 Rule 56 change merely codified the existing duty of full disclosure or represented a significant change in practice.

Compare *Fox Indus. v. Structural Preservation Sys.*, 922 F.2d 801 (Fed. Cir. 1990) (rejecting argument that "Rule 56 does not govern . . . duty of candor because the rule was promulgated after his involvement with the applications ceased . . ." "In 1977, the PTO clarified that Rule 56 merely 'codified the existing Office policy on fraud and inequitable conduct, which is believed consistent with the prevailing case law in the federal courts.'") with *In re Harita*, 847 F.2d 801 (Fed. Cir. 1988) (1977 change "inaugurated a whole new way of life in the

Court decisions adopted the important-to-a-reasonable-examiner standard in applying the inequitable conduct defense.<sup>77</sup> Under this standard, an item can be material even though the item does not, on objective evaluation of all the evidence, render the applicant's claims unpatentable.<sup>78</sup> An item is not material if it is cumulative to information already cited to or considered by the PTO examiner.<sup>79</sup> Mere arguments about the legal significance of references or other materials in the record are unlikely to be considered material misrepresentations because the examiner is free to reach his or her own conclusions about their significance.<sup>80</sup>

A reference not cited during the original prosecution may be brought to the PTO's attention in a reexamination, reissue, or continuation application. The examiner's action treating the reference as relevant or not relevant will carry weight in a later judicial determination of materiality, but the action is not conclusive.<sup>81</sup>

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prosecution of patent applications.”)

77. *Halliburton Co. v. Schlumberger Tech. Corp.*, 925 F.2d 1435, 1433 (Fed. Cir. 1991) (“PTO Rule 56 is the appropriate starting point in determining the threshold level of materiality. This broad standard most closely delineates how an applicant ought to conduct business with the PTO.” (citation omitted)).

78. *Merck & Co., Inc. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1421 (Fed. Cir. 1989) (the patent in suit is unenforceable for having been inequitably procured because the applicant withheld and misrepresented prior art and information even though that prior art and information did not render any of the claims of the patent invalid under the nonobviousness patentability requirement; “That the claimed invention may have been superior in one property to both the cited and withheld prior art may be a basis for patentability; it cannot serve automatically to render the withheld prior art either cumulative or immaterial.”).

79. *Halliburton Co. v. Schlumberger Tech. Corp.*, 925 F.2d 1435, 1440 (Fed. Cir. 1991) (“a patentee has no obligation to disclose an otherwise material reference if the reference is cumulative or less material than those already before the examiner.”).

*Cf. Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1179 (Fed. Cir. 1995) (uncited reference showed a combination of features and individual features not shown in the references before the examiner); *LaBounty Mfg. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1076 (Fed. Cir. 1992); *Gardco Mfg. v. Herst Lighting Co.*, 820 F.2d 1209, 1214 (Fed. Cir. 1987) (undisclosed prior art devices were not cumulative to those the PTO considered because the former were “the only prior art devices having all four of the structural elements of the claimed invention.”).

80. *Akzo N.V. v. United States Int'l Trade Comm'n*, 808 F.2d 1471, 1482 (Fed. Cir. 1986). *Cf. KangaROOS U.S.A., Inc. v. Caldor, Inc.*, 778 F.2d 1571, 1575-76 (Fed. Cir. 1985) (a groundless assertion of entitlement to a prior application's filing date may be inequitable conduct if done knowingly or with gross negligence; an applicant is not excused by an examiner's failure to make an entitlement determination).

81. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1179 (Fed. Cir. 1995) (“We have held that the result of a PTO proceeding that assesses patentability in light of information not originally disclosed can be of strong probative value in determining whether the undisclosed information was material. See *J.P. Stevens* (citation omitted) (reasonable rejection of claims in reliance on a reference during reissue proceeding established materiality of that reference). However, the standard to be applied in determining whether a reference is ‘material’ is not

*b. Materiality: Prima Facie Unpatentability*

In 1992, the PTO, responding to criticism of the reasonable examiner standard as vague and bearing no relation to any concept applied in other areas of patent law, changed the standard to one of "prima facie unpatentability":

[I]nformation is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.<sup>82</sup>

The new PTO materiality standard is prospective only.<sup>83</sup> The reasonable examiner standard governs inequitable conduct determinations in patent prosecutions before March 16, 1992,<sup>84</sup> and it is not certain that the courts will adopt the altered PTO Rule 56 standard for the inequitable conduct defense, which the courts recognized long before the adoption of the Rule 56 duty of candor in 1977.

*c. Claim Amendments—Timing and Manner of Disclosure*

The materiality of a prior art reference and other information

whether the particular examiner of the application at issue considered the reference to be important; rather, it is that of a 'reasonable examiner.' (citation omitted) Nor is a reference immaterial simply because the claims are eventually deemed by an examiner to be patentable thereover." (citation omitted).

82. 37 C.F.R. § 1.56(b) (1995) (emphasis added).

83. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1179 n.8 (Fed. Cir. 1995).

84. *Id.*

depends on what the applicant attempts to claim, and amendments narrowing the scope of claims pending in an application may make immaterial information that was material to broader claims. The amendment may result because the examiner independently discovers the reference.

Federal Circuit decisions express differing opinions on whether inequitable conduct can arise from an applicant's failure to cite a reference that was material only to claims that were amended or deleted during prosecution<sup>85</sup> or when the examiner independently finds a material reference the applicant failed to cite.<sup>86</sup> Also, decisions have pronounced no general rule about the timing of disclosure<sup>87</sup> but have found no inequitable conduct in specific situations when an applicant cited prior art late in a prosecution<sup>88</sup> or failed to cite art that came to

85. Compare *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1583 (Fed. Cir. 1991) ("A reference that is material only to withdrawn claims can not be the basis of a holding of inequitable conduct.") and *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1457 (Fed. Cir. 1984) (when a patent is attacked for failure to cite material prior art, a court assesses inequitable conduct by reference to the patent's claims, not claims that the examiner rejected for reasons other than the uncited prior art and which the applicant cancelled during prosecution) with *Fox Indus. v. Structural Preservation Sys.*, 922 F.2d 801, 803 (Fed. Cir. 1990) ("[A] breach of the duty of candor early in the prosecution may render unenforceable all claims which eventually issue from the same or a related application.") and *Driscoll v. Cebalo*, 731 F.2d 878, 885 (Fed. Cir. 1984) (failure to cite a known anticipatory prior art reference is inequitable conduct even though: (1) a new attorney for the inventor had amended a claim to avoid the reference disclosure before the examiner acted on the claim, and (2) the examiner suspended prosecution pending an interference before allowing the claims to which the withheld reference was material).

86. Compare *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1185, 1189 n.7 (Fed. Cir. 1995) ("When a reference was before the examiner, whether through the examiner's search or the applicant's disclosure, it cannot be deemed to have been withheld from the examiner.") (quoting *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1582 (Fed. Cir. 1991)); Nies, J., dissenting: "prior to *Scripps*, this court concluded that a reference not disclosed to the Examiner but which is later discovered by the Examiner can be deemed to be withheld from the PTO" and *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1582 (Fed. Cir. 1991) with *A.B. Dick Co. v. Burroughs Corp.*, 798 F.2d 1392, 1399 (Fed. Cir. 1986) (references not cited to an examiner were material when: (1) an application's claims were allowed, (2) after a delay caused by an interference, the examiner rejected the claims after independently discovering the references, and (3) the claims were allowed after amendment).

87. In one decision, the Federal Circuit held that an instance of inequitable conduct during prosecution could be "cured" by a full disclosure. *Rohm & Haas Co. v. Crystal Chem. Co.*, 722 F.2d 1556, 1572 (Fed. Cir. 1983), *later proceeding*, 736 F.2d 688 (Fed. Cir. 1984).

88. *Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.H.*, 945 F.2d 1546, 1553-54 (Fed. Cir. 1991) (the patentee called the examiner's attention to the Hoffar reference "after allowance of the claims, following which the examiner reopened prosecution."); "There was evidence that [the inventor's] German patent attorney knew of the Hoffar reference, and believed that it was merely cumulative to the prior art already before the U.S. examiner; that the German attorney responded promptly to the request by his U.S. patent attorney for all references cited in other countries; and that after receiving these references, which included

applicant's attention only shortly before the patent issued.<sup>89</sup>

In the 1992 amendment to Rule 56, the PTO expressly stated that the disclosure duty relates only to pending claims, but this does not resolve whether there is inequitable conduct when an applicant knowingly fails to cite a reference that is material to a pending claim but later amends the claim.<sup>90</sup> The PTO also adopted rules on the timing of disclosures in information disclosure statements.<sup>91</sup>

Questions have arisen whether an applicant violates the duty of candor by citing (burying) a reference in a long list of other, less material references. One district court decision found improper burying.<sup>92</sup> Later, the Federal Circuit acknowledged that burying could occur but reversed a district court finding of burying because there was no clear evidence of an intent to conceal the reference.<sup>93</sup>

#### *d. Search Reports from Foreign Patent Offices*

A reference cited by a foreign patent office during examination of a counterpart application is not necessarily material because the claims may differ and foreign patentability standards are not identical to those in the United States.<sup>94</sup> Nevertheless, such cited references are likely to be material, and the PTO encourages applicants to scrutinize carefully foreign patent office search reports to determine whether they contain material prior art that should be cited in the United States.<sup>95</sup>

Hoffar, the U.S. attorney promptly cited Hoffar to the PTO.").

89. *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1073 (Fed. Cir. 1994); *Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co., Inc.*, 973 F.2d 911, 917-18, 1921 (Fed. Cir. 1992) (a company and its patent attorney did not intend to deceive the PTO by failing to disclose another patent that apparently claimed the same invention as that claimed in the company's pending application when: (1) the interfering patent issued after the company paid the issue fee on its application, (2) its patent issued six weeks later, (3) the patent attorney took ten weeks to study the interfering patent and determine "what the heck to do about it," and (4) the attorney disclosed the interfering patent in an information disclosure statement filed five weeks later in a sibling application).

90. 37 C.F.R. § 1.56 (1995).

91. *Id.*

92. *Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.*, 359 F. Supp. 948, (S.D. Fla. 1972), *aff'd*, 479 F.2d 1328 (5th Cir. 1972).

93. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1183-84 (Fed. Cir. 1995).

94. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, (Fed. Cir. 1995) (noting the "risk in relying on foreign patent prosecution in light of differences in disclosure requirements, claim practice, form of application, and standard of patentability"); *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072 n.2 (Fed. Cir. 1993) ("[T]he theories and laws of patentability vary from country to country, as do examination practices.").

95. 37 C.F.R. § 1.56(a)(1) (1995).

## 2. Information Disclosure Statements

An applicant may submit to the PTO an information disclosure statement (IDS) listing patents, publications, and other information that may be relevant to patentability.<sup>96</sup> Inclusion of an item in an IDS is neither an admission that the item is in fact a material prior art reference<sup>97</sup> nor a representation that a search of the prior art has been made.<sup>98</sup> The PTO encourages applicants to use form PTO-1449 to submit an IDS.

From 1977 to 1992, the PTO's Rule 97 made submission of an IDS an optional but encouraged means of complying with the duty of candor. In 1992, the PTO amended Rule 97, making submission of an IDS necessary "[i]n order to have information considered by the Office during the pendency of a patent application."<sup>99</sup>

Rule 97 imposes time limits on filing an IDS.<sup>100</sup> An IDS filed within three months of filing the application or before the first Office action on the merits is always timely. An IDS filed after the three-month limit may be timely if a fee or certification is submitted. An applicant who, for any reason, does not meet the time limits, may have an item considered by abandoning the application and filing a continuation application with a timely IDS.

An IDS must list patents, publications, and other information.<sup>101</sup> Before the 1992 amendment, Rule 97 required the applicant to concisely explain the relevance of each listed item. The 1992 amendment made a concise relevance explanation mandatory only for items "not in the English language."<sup>102</sup>

## 3. Persons Subject to Duty—Duty to Search—Foreign Patent Agents—Attorney Conflicts of Interest

The duty of candor extends to: (1) the inventor or inventors, (2) the attorney or agent who prepares or prosecutes the application, and (3) any individual who is substantively involved in the preparation or prosecution of the application and who is associated with the inven-

96. 37 C.F.R. § 1.97 (1995).

97. 37 C.F.R. § 1.97(h) (1995).

98. 37 C.F.R. § 1.97(g) (1995).

99. 37 C.F.R. § 1.97 (1995).

100. *Id.*

101. 37 C.F.R. § 1.98(a) (1995). Copies of the cited items should be enclosed. *Id.* If an item is in a language other than English, a translation should be provided if one is readily available to the applicant. 37 C.F.R. § 1.98(c) (1995).

102. 37 C.F.R. § 1.98(a)(3) (1995).



tor, the assignee, or anyone to whom there is an obligation to assign the application.<sup>103</sup>

The duty of candor requires persons who are substantively involved in a prosecution to disclose only what they know. Court decisions do not impose a duty to conduct a search of the prior art, but they caution that a person may not cultivate ignorance, that is, "disregard numerous warnings that material information or prior art may exist, merely to avoid actual knowledge of that information or prior art."<sup>104</sup>

The duty of candor extends to patent agents or attorneys in other countries who have primary responsibility for the prosecution of an application and act through a corresponding U.S. attorney or agent.<sup>105</sup> In the *Harita* decision,<sup>106</sup> the Federal Circuit held that the PTO failed to establish such "intent to mislead" the PTO as to justify rejection of the patentee's application seeking reissuance of the patent when:

(1) a Japanese patent agent for the inventors, who worked for a small Japanese company that had little prior patent experience, filed in Japan an application claiming a group of chemical compounds useful for treating asthma;

(2) the agent forwarded an English version of the application to a U.S. patent attorney for filing in the United States PTO;

(3) the U.S. attorney, in recommending that the applicant separately claim the method of using the compounds, advised the agent that such a method-of-use claim, unlike the compound claim, would not be invalidated by "prior art teaching a species of the genus of compounds in question;"

(4) during the prosecution of a corresponding application in France, a prior art reference disclosing such a species within the claim in the U.S. application was cited and brought to the attention of the applicant/inventors;

(5) on advice of the Japanese agent, the applicant/inventors

103. 37 C.F.R. § 1.56(c) (1995). See *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1415 n.8. (Fed. Cir. 1987) (in applying the requirement that there be "knowledge chargeable to applicant" of the prior art or information and its materiality, "applicant" "includes the patentee and the attorney who prosecuted the application that resulted" in the patent-in-suit, because "the knowledge and actions of applicant's attorney are chargeable to applicant."); *Fox Indus. v. Structural Preservation Sys.*, 922 F.2d 801, 804 (Fed. Cir. 1990).

104. *FMC Corp. v. Hennessy Indus.*, 836 F.2d 521, 526 n.6 (Fed. Cir. 1987).

105. *Gemveto Jewelry Co., v. Lambert Bros.*, 542 F. Supp. 933, 938 (S.D.N.Y. 1982) ([I]nequitable conduct occurred when an agent in another country withheld material information from the U.S. corresponding attorney and such information was never disclosed to the PTO examiner). Cf. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995).

106. *In re Harita*, 847 F.2d 801 (Fed. Cir. 1988).

failed to forward the reference to the U.S. attorney for citation to the U.S. PTO examiner;

(6) in so advising the lack of necessity for citing the reference, the Japanese patent agent assumed that the practice in Japan, which imposed no duty of disclosure, applied to the U.S.;

(7) after issuance of the patent on the U.S. application, the Japanese agent became aware of the duty to disclose known material prior art under U.S. practice;

(8) the agent informed the assignee of the U.S. application that the newly discovered prior art should have been disclosed to the PTO; and

(9) the assignee thereafter, "with reasonable promptness" (about 15 months after issuance of the patent), filed an application for reissue to narrow the scope of the claims of the patent.<sup>107</sup>

In *Harita*, the court noted that "an *ideal* Japanese patent agent . . . should have known more about U.S. PTO rules and practice and developing case law," but it refused to "infer merely from some vague thing called 'gross negligence' an intent which it was the PTO's obligation to establish and especially . . . should not infer it in light of detailed rules of procedure enacted long after the events in this case took place."<sup>108</sup>

A difficult issue of potential conflict of interest may arise when a patent attorney represents two unrelated applicants and knows of information material to one applicant's patent application only because of the other applicant's confidential communications. In *Molins*, the issue was presented but not decided.<sup>109</sup> The court held that an attorney did not commit inequitable conduct by failing to disclose in the prosecution of an application by one client a pending, earlier-filed application of another client. The undisclosed earlier application was not material because it was cumulative to information already before the examiner. The court noted that the situation was:

fraught with possible conflict of interest because [the attorney's] dual representation of two clients seeking patents in closely related technologies created a risk of sacrificing the interest of one client for that of the other and of failing to discharge his duty of candor to the PTO with respect to each client. Whether or not there was a conflict of interest, however, is not before us, and we express no opinion thereon. Nor do we express any opinion regarding the ap-

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107. 847 F.2d at 803-07.

108. *Id.* at 809.

109. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1185 (Fed. Cir. 1995).

parent conflict between an attorney's obligations to the PTO and the attorney's obligation to clients.<sup>110</sup>

Two judges expressed polar opinions on the issue. Judge Nies opined that the attorney's "representation of clients with conflicting interests provides no justification for deceiving the PTO. Ethics required him to withdraw."<sup>111</sup> Judge Newman opined that the attorney had "neither authority nor obligation to breach the confidentiality of that client's pending application, on behalf of a different client."<sup>112</sup>

#### 4. Consequences of Inequitable Conduct

Breach of the duty of candor constitutes inequitable conduct if the withheld or misrepresented information was material and the responsible person acted with sufficient culpability.

##### *a. Culpability—Intent to Deceive*

Before 1988, some Federal Circuit decisions suggested the culpability element was satisfied by a showing of gross negligence.<sup>113</sup> In the 1988 in banc *Kingsdown* decision, the Federal Circuit decreed that: "a finding that particular conduct amounts to 'gross negligence' does not of itself justify an inference of intent to deceive; the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive."<sup>114</sup>

Federal Circuit decisions since *Kingsdown* consistently emphasize that the inequitable conduct defense requires that there be a finding of intent to deceive and that such intent must be proved by clear and convincing evidence.<sup>115</sup> Some decisions decry the tendency of accused infringers to rely routinely on the defense, describing it as a "plague."<sup>116</sup> Other decisions, recognizing the negative conse-

110. *Id.*

111. *Id.* at 1190.

112. *Id.* at 1192.

113. *J.P. Stevens & Co. v. Lex Tex, Ltd.*, 747 F.2d 1553, 1560 (Fed. Cir. 1984); *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1368 (Fed. Cir. 1984).

114. *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988).

115. *E.g.*, *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 939 (Fed. Cir. 1990) ("Intent to deceive should be determined in light of the realities of patent practice, and not as a matter of strict liability whatever the nature of the action before the PTO . . . . Given the ease with which a relatively routine act of patent prosecution can be portrayed as intended to mislead or deceive, clear and convincing evidence of conduct sufficient to support an inference of culpable intent is required.").

116. *Burlington Indus. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988):

quences of the defense on professional reputations, reiterate the importance of maintaining the integrity of the patent procurement process.<sup>117</sup>

Intent to deceive need not be proved by direct evidence but rather may be inferred from circumstantial evidence.<sup>118</sup> For example, in one decision, the court held that “[f]ailure to cite to the PTO a material reference cited elsewhere in the world justifies a strong inference that the withholding was intentional.”<sup>119</sup>

There can be no intent to deceive in withholding information

[T]he habit of charging inequitable conduct in almost every major patent case has become an absolute plague. Reputable lawyers seem to feel compelled to make the charge against other reputable lawyers on the slenderest grounds, to represent their client’s interests adequately, perhaps. They get anywhere with the accusation in but a small percentage of the cases, but such charges are not inconsequential on that account. They destroy the respect for one another’s integrity.

117. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1182 (Fed. Cir. 1995):

One who has engaged in inequitable conduct has inflicted damage on the patent examining system, obtaining a statutory period of exclusivity by improper means, and on the public, which must face an unlawfully-granted patent. Loss of one’s patent and damage to reputation are justified penalties for such conduct. On the other hand, unjustified accusations of inequitable conduct are offensive and unprofessional. They have been called a “plague” on the patent system. Unjustified accusations may deprive patentees of their earned property rights and impugn fellow professionals. They should be condemned.

(citation omitted).

118. See, e.g., *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1189-90 (Fed. Cir. 1993) (“[S]moking gun’ evidence is not required in order to establish an intent to deceive.”); *LaBounty Mfg. v. United States Int’l Trade Comm’n*, 958 F.2d 1066, 1076 (Fed. Cir. 1992) (quoting *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411 (1987)):

Direct proof of wrongful intent is rarely available but may be inferred from clear and convincing evidence of the surrounding circumstances.

....

No single factor or combination of factors can be said always to *require* an inference of intent to mislead; yet a patentee facing a high level of materiality and clear proof that it knew or should have known of that materiality, can expect to find it difficult to establish “subjective good faith” sufficient to prevent the drawing of an inference of intent to mislead. A mere denial of intent to mislead (which would defeat every effort to establish inequitable conduct) will not suffice in such circumstances.

*Merck & Co. v. Danbury Pharamcal, Inc.*, 873 F.2d 1418, 1422 (Fed. Cir. 1989) (“Intent need not, and rarely can, be proven by direct evidence.”).

119. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1182 (Fed. Cir. 1995):

[T]he alleged conduct must not amount merely to the improper performance of, or omission of, an act one ought to have performed. Rather, clear and convincing evidence must prove that an applicant had the specific intent to accomplish an act that the applicant ought not to have performed, *viz.*, misleading or deceiving the PTO. In a case involving nondisclosure of information, clear and convincing evidence must show that the applicant made a deliberate decision to withhold a known material reference.

when the person has no knowledge of the information.<sup>120</sup>

*b. Examination—Continuation and Reissue  
Applications—Cure—Interferences*

In 1988, after the *Harita* decision, the PTO announced that it was ending its practice of investigating and rejecting applications for noncompliance with the duty of candor.<sup>121</sup> It indicated that it was not a suitable forum for determining questions of intent to deceive, which *Harita* made necessary. Questions of compliance with the duty would be determined by the courts following a challenge to a patent's enforceability because of alleged inequitable conduct.

A patent issuing on a continuation or reissue application may be unenforceable if inequitable conduct occurred in connection with the original or parent application.<sup>122</sup> In *Rohm & Haas*,<sup>123</sup> the Federal Circuit held that an instance of inequitable conduct (submission of misleading data) could be cured later in the prosecution of an application if the applicant makes a corrective disclosure.<sup>124</sup> This privilege to cure may extend to a cure in a continuation application, but decisions suggest that, once a patent issues, a reissue application cannot be used to cure inequitable conduct.<sup>125</sup>

120. See, e.g., *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1415 (Fed. Cir. 1987):

[O]ne who alleges a "failure to disclose" form of inequitable conduct must offer clear and convincing proof of: (1) prior art or information that is material; (2) knowledge chargeable to applicant of that prior art or information and of its materiality; and (3) failure of the applicant to disclose the art or information resulting from an intent to mislead the PTO. That proof may be rebutted by a showing that: (a) the prior art or information was not material (e.g., because it is less pertinent than or merely cumulative with prior art or information cited to or by the PTO); (b) if the prior art or information was material, a showing that the applicant did not know of that art or information; (c) if applicant did know of that art or information, a showing that applicant did not know of its materiality; (d) a showing that applicant's failure to disclose art or information did not result from an intent to mislead the PTO.

121. Implementation of 37 C.F.R. §1.56, 1095 OFF. GAZ. PAT. OFFICE 16 (Oct. 11, 1988).

122. See *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 882 F.2d 1556, 1563-64 n.7 (Fed. Cir. 1989); *on remand to 746 F. Supp. 1413* (N.D. Cal. 1990), *aff'd* 925 F.2d 1480 (Fed. Cir. 1991), *Digital Equip. Corp. v. Diamond*, 653 F.2d 701, 710 (1st Cir. 1981).

123. *Rohm & Haas Co. v. Crystal Chem. Co.*, 722 F.2d 1556 (Fed. Cir. 1983), *later proceeding*, 736 F.2d 688 (Fed. Cir. 1984).

124. *Id.* at 1571-72.

125. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 882 F.2d 1556, 1564 n.4 (Fed. Cir. 1989), *on remand to 746 F. Supp. 1413* (N.D. Cal. 1990), *aff'd*, 925 F.2d 1480 (Fed. Cir. 1991):

It is well settled that, in the . . . case of inequitable conduct during prosecution of the original application, reissue is not available to obtain new claims and thereby rehabilitate the patent. See, e.g., *In re Clark*, 522 F.2d 623, 627 . . . (reissue unavailable to rescue patentee who committed inequitable con-

Inequitable conduct is a basis for awarding priority against a party to an interference (whether against an applicant or a patentee).<sup>126</sup> In 1991, the PTO confirmed that inequitable conduct issues could be raised in interferences even though the PTO had ceased inequitable conduct investigations in *ex parte* prosecutions.<sup>127</sup>

*c. Unenforceability—All Claims Rule—Attorney Fees*

If the inequitable conduct is discovered after a patent issues, the patent will be unenforceable even if it is otherwise valid and infringed. Courts apply a two-step approach in adjudicating an inequitable defense: first, the court must find the threshold facts of materiality and intent to deceive; second, if the thresholds are met, the court weighs the degree of materiality and intent "to determine whether the equities warrant a conclusion that inequitable conduct occurred."<sup>128</sup>

If inequitable conduct occurs in prosecution of a patent application, all the patent's claims are unenforceable, even claims dealing with subject matter not related to the misconduct.<sup>129</sup> In the 1988 *banc Kingsdown* decision, the Federal Circuit confirmed the all claims rule: "When a court has finally determined that inequitable conduct occurred in relation to one or more claims during prosecution of the patent application, the entire patent is rendered unenforceable."<sup>130</sup> Unenforceability may extend to other related patents.<sup>131</sup>

An accused infringer who succeeds in establishing that the patent was procured through inequitable conduct may be awarded attorney fees,<sup>132</sup> but such award is discretionary with the trial judge and does not necessarily follow an inequitable conduct finding.<sup>133</sup>

duct during original prosecution).

*But cf.* *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1183-84 (Fed. Cir. 1995); *In re Harita*, 847 F.2d 801, 808-809 (Fed. Cir. 1988).

126. *Driscoll v. Cebalo*, 731 F.2d 878, 885 (Fed. Cir. 1984); *Langer v. Kaufman*, 465 F.2d 915, 921 (C.C.P.A. 1972).

127. 57 Fed. Reg. 2021, 2023 (1992). See *Gustavsson v. Valentini*, 25 U.S.P.Q.2d 1401, 1407-08 (1991).

128. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995).

129. *J.P. Stevens & Co. v. Lex Tex, Ltd.*, 747 F.2d 1553, 1561 (Fed. Cir. 1984).

130. *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 877 (Fed. Cir. 1988).

131. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1182 (Fed. Cir. 1995); *Consolidated Aluminum Corp. v. Foseco Int'l. Ltd.*, 910 F.2d 804, 809 (Fed. Cir. 1990).

132. *Fox Indus., Inc. v. Structural Preservation Sys., Inc.*, 922 F.2d 801, 804 (Fed. Cir. 1990); *Monolith Portland Midwest Co. v. Kaiser Aluminum & Chem. Corp.*, 407 F.2d 288, 298 (9th Cir. 1969).

133. *Gardco Mfg., Inc. v. Herst Lighting Co.*, 820 F.2d 1209, 1215 (Fed. Cir. 1987).

*d. Walker Process*

A person injured by willfully committed inequitable conduct involving highly material information that results in an improper monopoly in a defined relevant market may sue for damages under either the federal antitrust laws or state unfair competition laws.<sup>134</sup>

*B. Recent Case Examples*

Four 1996 Federal Circuit decisions address inequitable conduct defenses. Only one upheld the defense, relying in part on a conflict between the testimony of the inventor and his patent attorney as to their communications, a sobering reminder of the strains on professional relationships that the inequitable conduct defense engenders.<sup>135</sup> Another decision "jaw-boned" a corporate patent owner for questionable patent prosecution practice.<sup>136</sup> Perhaps the most significant decision in terms of precedential value is *Nordberg*,<sup>137</sup> which found no inequitable conduct in failure to disclose a prior art reference patent that rendered a patent in suit invalid when the corporate assignee of the patent in suit owned the reference patent but the individuals responsible for prosecuting the patent had no personal knowledge of the patent.<sup>138</sup>

In *Refac International, Ltd. v. Lotus Development Corp.*<sup>139</sup> the Federal Circuit held that the district court did not err in finding ineq-

134. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 175-76 (1965); *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 166-67 (Fed. Cir. 1985); *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1366 (Fed. Cir. 1984).

Willful inequitable conduct in procurement of a patent may also violate Section 5 of the Federal Trade Commission Act. 15 U.S.C. § 45(a)(1) (1988); *American Cyanamid Co. v. F.T.C.*, 363 F.2d 757, 769 (6th Cir. 1966).

Even without inequitable conduct, filing, or threatening to file, a patent infringement suit in bad faith and without a genuine belief in the possibility of success may violate the antitrust laws. *Handgards, Inc. v. Ethicon, Inc.*, 743 F.2d 1282, 1295-96 (9th Cir. 1984). A bad faith enforcement claim cannot be pursued unless the patentee's action was "objectively baseless"; only if the action was objectively baseless can the court examine the patentee's subjective motivation in bringing the suit (e.g., to drive out a competitor). *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 3 F.3d 404, 413 (Fed. Cir. 1993), replaced by 15 F.3d 1573 (Fed. Cir. 1993). See also *Professional Real Estate Investors, Inc. v. Columbia Pictures Indus., Inc.*, 508 U.S. 49, 60-61 (1993).

135. *Refac Int'l., Ltd. v. Lotus Dev. Corp.*, 81 F.3d 1576, 1582 (Fed. Cir. 1996).

136. *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1585 (Fed. Cir. 1996).

137. *Nordberg, Inc. v. Telsmith, Inc.*, 82 F.3d 394 (Fed. Cir. 1996).

138. *Id.* at 397.

139. *Refac Int'l., Ltd. v. Lotus Dev. Corp.*, 81 F.3d 1576 (Fed. Cir. 1996).

uitable conduct based on the patentee's submission of opinion affidavits on the patent specification's disclosure sufficiency without disclosing one affiant's prior association with the inventor and familiarity with the commercial embodiment of the invention.

The patent concerned a program for converting software source code to object code. The PTO examiner rejected the claims for inadequate enabling disclosure. A co-inventor (Pardo) submitted an affidavit stating that the patent specification was sufficient to enable a person skilled in programming to make and use the claimed invention. Unpersuaded, the examiner made the rejection final, noting that the inventor's affidavit was "self serving and therefore has very little probative value."<sup>140</sup>

The inventors (Pardo and Landau) and their attorney adopted the strategy of "filing affidavits from three people other than the inventors, with different experience and skill levels, attesting to the sufficiency of the disclosure."<sup>141</sup> They filed the three affidavits with an amendment stating that "the present invention is directed to the computer scientist or compiler writer, not a mere programmer, and it is such compiler writer who is the man of "ordinary skill in the art" who would practice the invention as defined by the claims."<sup>142</sup> After the affidavits were filed, the examiner withdrew the insufficient disclosure rejection.

The inventors and their attorneys did not disclose to the PTO that "each of the affiants had a prior association with the inventors' company, Lanpar, Ltd., or that they had pre-existing knowledge of a commercial embodiment of the invention, the LANPAR program."<sup>143</sup> The district court found that there was insufficient proof of inequitable conduct in the disclosure omission for two of the affiants,<sup>144</sup> but

140. *Id.* at 1578.

141. *Id.*

142. *Id.*

143. *Id.* at 1579.

144. The two affidavits were by Bullen and Cikra. *Refac*, 81 F.3d at 1578.

Bullen, a supervisor of programmers, "stated that an average programmer could have written a computer program from the application's disclosure using programming techniques known before the application was filed." *Id.* "[W]hen Bullen was a consultant with UNIVAC Canada, he had worked with Landau, who was at the time a programmer employed by Bell Canada . . . [The inventors] Pardo and Landau had informed Bullen, before he executed his affidavit, that a computer program implementing the invention was in use at Bell Canada." *Id.* at 1579. The district court held that submission of this affidavit was not inequitable conduct because the inventors "had not understood that the need for an affidavit from a disinterested person might have precluded use of Bullen as an affiant, or that knowledge of Bullen's contact with Bell Canada and its relationship with Lanpar was material to consideration of the disclosures by the PTO." *Id.*



the fourth affiant, Jones, "was a different matter."<sup>145</sup> Jones, a computer scientist and compiler writer, stated: "[F]rom the written disclosures and flow chart shown in the drawing of such patent application, [I] could have produced as of August 12, 1970, and prior thereto, and using only programming techniques known on or prior to August 12, 1970, the necessary coding and could have written a detailed computer program therefrom."<sup>146</sup> Jones worked for the inventors' company Lanpar for not more than eight weeks, less than six months before executing his affidavit. He learned internal details of the LANPAR Program, observed it in operation, and drafted an introduction for its manual. The district court found that "the information omitted from Jones's affidavit was material to the examiner's evaluation of the affidavit and that the inventors submitted the affidavit with an intent to mislead the PTO."<sup>147</sup> The inventors Landau and Pardo "had an opportunity to review Jones's affidavit, as they were sent copies of a draft and the final affidavit after it was executed."<sup>148</sup> The inventor Pardo "was actively involved in providing the attorney with background information regarding the three affiants, particularly Jones."<sup>149</sup> "Jones's extensive experience with and knowledge of the LANPAR Program contradicted the very essence of the disinterested affidavit' . . . ."<sup>150</sup> Because "the examiner did not withdraw the rejection in response to [inventor] Pardo's affidavit, the inventors knew that Jones's connection with the invention would

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Cikra, a computer programmer, "stated that he had actually written a computer program solely from the disclosure and had sufficiently tested the program to verify its operability." *Id.* at 1578. "Cikra had worked with the inventors to enable a version of the LANPAR program to operate with another software system, reviewed portions of the LANPAR program source code, and observed the program being used." *Id.* at 1579. The district court held that submission of this affidavit posed a "closer question" but was not inequitable conduct because

Cikra had had limited contact with the program and . . . while prudence would have dictated disclosing Cikra's contact with the invention, the inventors apparently did not know, given their lack of familiarity with patent prosecution, that Cikra's involvement should have been disclosed to the PTO. The district court also found that Cikra's affidavit failed to mention that he had taken a compiler course in college and had sorting program experience, but that there was no reason for the inventors or their attorney to have believed that such information was relevant to evaluation of his affidavit.

*Id.*

145. *Id.* at 1580.

146. *Id.* at 1579.

147. *Id.* at 1580.

148. *Id.*

149. *Refac Int'l, Ltd. v. Lotus Dev. Corp.*, 81 F.3d 1576, 1580 (Fed. Cir. 1996).

150. *Id.*

have been material . . . .”<sup>151</sup> The omissions in the Bullen and Cikra affidavits heightened the effect of the Jones affidavit’s fraudulent omission.

The Federal Circuit affirmed. First, the district court did not clearly err in finding that the omitted prior association was material. “We cannot hold as a matter of law that omission of a relevant part of one’s employment history on an affidavit intended to show the adequacy of the patent specification to one of ordinary skill in the art, when such an affidavit by the inventor was earlier rejected, does not constitute inequitable conduct.”<sup>152</sup> Jones had worked at the inventor’s company less than six months before he executed his affidavit, which recited his employment history in detail. He reviewed documentation for the commercial embodiment of the invention. When he reviewed the application’s disclosure, he recognized the flow chart as the same one the inventor had shown him in a training session. The affiant’s “own testimony thus indicated that he possessed pre-existing knowledge of the invention when he prepared his affidavit. It would surely have been important for the examiner, and any reasonable examiner, to know of [his] association with [the inventor’s company] and his pre-existing knowledge of the [invention’s commercial embodiment].”<sup>153</sup>

The patentee’s argument that the Jones affidavit was cumulative to the other two and therefore was not material under Federal Circuit case law is not persuasive:

We decline to place submitted cumulative affidavits in the same status as unsubmitted cumulative prior art. While it is not necessary to cite cumulative prior art because it adds nothing to what is already of record (although it may be prudent to do so), one cannot excuse the submission of a misleading affidavit on the ground that it was only cumulative. Affidavits are inherently material, even if only cumulative. The affirmative act of submitting an affidavit must be construed as being intended to be relied upon. It is not comparable to omitting an unnecessary act.

Whether or not Jones’s affidavit was cumulative to that of Cikra’s and Bullen’s affidavits is . . . of no consequence. Since any one of the affidavits from Cikra, Bullen, and Jones may have resulted in an allowance of the claims, each affidavit *ipso facto* had a certain level of materiality . . . . Since the examiner did not allow the

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151. *Id.*

152. *Id.* at 1585.

153. *Id.* at 1581.

claims in response to the inventor's own affidavit, the inventors were on notice that the examiner would consider it important to know of the affiants' pre-existing knowledge of the invention or his connection with the inventors. An inventor cannot submit a misleading affidavit among a plurality of affidavits and later argue that it was the nonmisleading affidavit that resulted in allowance, thus effectively curing the defective affidavit.<sup>154</sup>

The patentee's argument that the misleading affidavit offered mere opinion, which, under PTO guidelines, had no probative value, and, therefore, "cannot be used to infer an intent to mislead,"<sup>155</sup> "qualifies only for a chutzpah award".<sup>156</sup>

An affidavit submitted to overcome a rejection is intended to be relied upon . . . The inventors submitted the Jones affidavit to the PTO in an attempt to overcome a rejection. It was incumbent upon them to provide the PTO with sufficient information for a reasonable examiner to consider the opinion in the affidavit in context, not with a selective and misleading disclosure. The inventors failed to do that and cannot *post facto* hide behind the MPEP guidelines to argue that what they did with a purpose should be disregarded.<sup>157</sup>

Second, the district court did not err in inferring an intent to deceive:

The inventors had an opportunity to review Jones's affidavit before it was submitted to the PTO. Given what the examiner characterized as the self-serving nature of Pardo's affidavit, they were on notice from the PTO that affidavits from disinterested persons were needed in order to overcome the substantive ground of the rejection. The inventors should therefore have known that the fact of an affiant's prior knowledge of the invention would have been important to the examiner in deciding whether to withdraw the rejection and allow the application, particularly when the examiner had no way of otherwise obtaining the omitted information about Jones's background. *See Paragon Podiatry Lab., Inc. v. KLM Lab., Inc. . . .*"The inference [of an intent to mislead] arises not simply from the materiality of the affidavits, but from the affirmative acts of submitting them, their misleading character, and the inability of the examiner to investigate the facts."<sup>158</sup>

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154. *Refac Int'l, Ltd. v. Lotus Dev. Corp.*, 81 F.3d 1576, 1583-84 (Fed. Cir. 1996).

155. *Id.* at 1584.

156. *Id.*

157. *Id.*

158. *Id.* at 1581-82 (citations omitted).

The appeals court noted that "determining whether there was an intent to mislead the PTO involved credibility determinations,"<sup>159</sup> referring to a conflict in the testimony between the inventors and their patent attorney. The inventors' attorney testified that: (1) he inquired into, but was not told by the inventors of, the affiant's prior association with the inventors and knowledge of the invention, and (2) "if he had had this knowledge, he would have either disclosed such information to the PTO or not used [the] affiant."<sup>160</sup> One inventor testified that "his attorney knew that [the affiant] had worked at [the inventors' company]."<sup>161</sup> Because, as the district court found, the inventors did not inform their patent attorney of the affiants' association with their company and knowledge of the commercial embodiment after he had inquired into the affiants' prior associations, the district court could conclude that "withholding such information from their attorney and effectively from the PTO was intentional."<sup>162</sup>

In *Litton Systems, Inc. v. Honeywell, Inc.*,<sup>163</sup> the Federal Circuit reached a conclusion about an expert declaration that contrasts with that in *Refac*. Litton's patent claimed a method for making nearly perfect mirrors for ring-laser gyroscopes for aircraft navigation systems. The method entailed bombarding targets with a "Kaufman-type ion beam source" in a controlled atmosphere vacuum chamber to deposit on a rotating substrate multiple layers, the alternating layers having different indices of refraction.

In 1978, Litton submitted its original application to the PTO. During prosecution of the application, Litton cited no prior art. The patent ('958) issued on March 6, 1979. On July 2, 1985, while litigating with another party over RLG mirrors, Litton sought to reissue the '958 patent. Their reissue application incorporated dependent claim 2 into independent claim 1, thereby narrowing its scope. On August 30, 1985, Litton submitted a patentability report citing eighty-two prior art references to the examiner.<sup>164</sup> During prosecution of the reissue application, the patentee Litton submitted an affidavit by one Baumeister to overcome the PTO examiner's rejection, which cited prior art disclosing, inter alia, use of a duoplasmatron for making ion beam depositions. After the submission, the examiner

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159. *Refac Int'l., Ltd. v. Lotus Dev. Corp.*, 81 F.3d 1576, 1582 (Fed. Cir. 1996).

160. *Id.*

161. *Id.*

162. *Id.*

163. *Litton Sys., Inc. v. Honeywell, Inc.*, 87 F.3d 1559 (Fed. Cir. 1996).

164. *Id.* at 1565.

allowed the claims, and the PTO reissued the patent on January 31, 1989 (reissue '849).

The district court found inequitable conduct in Litton's failure to disclose certain references and in its submission of Baumeister's declaration. It determined that Baumeister's declaration deliberately misled the examiner by omitting his lack of experience with the claimed technology.

Baumeister's declaration did not present any new facts or arguments to distinguish the invention from the prior art, but rather provided the examiner with the testimony of a man who was represented to be a person of great skill in the pertinent art. Baumeister's testimony at trial proved beyond question that he was not such a person.<sup>165</sup>

The Federal Circuit reversed. First, the trial court "both overestimated and misconstrued the Baumeister declaration".<sup>166</sup>

The Baumeister declaration was only one of four different declarations on which the examiner based allowance of the '849 reissue claims. Furthermore, the declaration does not misstate Mr. Baumeister's qualifications. He is an academic whose specialty is optical coatings. He led a university research team to obtain mirrors having the highest possible reflectivity. He did not purport to have expertise in ion-beam deposition. In sum, Baumeister professed no more than his actual qualifications. He did not ever profess experience with a duoplasmatron or ion-beam. Despite the trial court's insinuation, the examiner could not have attributed false qualifications to Baumeister.<sup>167</sup>

Second, the district court's finding that the patentee intentionally withheld a prior art reference (Laznovsky):

cannot support inequitable conduct because the examiner received and considered Laznovsky during reissue. An applicant cannot intentionally withhold a reference actually considered by the PTO, even though the applicant may not have disclosed the art. Thus, because Laznovsky was before the examiner, the applicant did not intentionally withhold the reference.<sup>168</sup>

In *B.F. Goodrich Co. v. Aircraft Braking Systems Corp.*<sup>169</sup> the

165. *Id.* at 1570.

166. *Id.* at 1571.

167. *Id.*

168. *Litton Sys., Inc. v. Honeywell, Inc.*, 87 F.3d 1559, 1571 (Fed. Cir. 1996)(citations omitted).

169. *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577 (Fed. Cir. 1996).

Federal Circuit affirmed a district court's no-equitable conduct finding even though the patentee failed to disclose to the PTO a prior art reference and its own "public use," each of which rendered the patent invalid. The patents claimed an aircraft landing gear disk brake assembly and a method of overhauling a disk brake assembly. The district court held the patents' claims invalid for obviousness because the difference between a prior art reference, the "Dunlop" paper, which was not before the PTO during examination, and the claimed invention was "relatively minor"<sup>170</sup> and the reference provided the suggestion to make the invention.

The district court found no inequitable conduct though it was "troubled" by the patentee's conduct, including: (1) the failure to disclose potential on-sale bars in the form of sales demonstrations to potential customers more than a year before the patentee filed its application, (2) the failure to disclose the Dunlop paper even though it was in the files of several employees of the patentee, and (3) the submission of a "state of the art" declaration by the patentee's director of engineering, which stated that he (the director) had read the literature and attended trade shows and seminars and had never seen a suggestion for a construction such as that claimed.

The Federal Circuit affirmed, echoing the district court's concern about the patentee's conduct but giving it "the benefit of the doubt because determinations of obviousness and the applicability of the on-sale bar are often close and subject to varying reasonable interpretations."<sup>171</sup> First,

[t]here was a basis for the patent attorney prosecuting the applications to conclude that [the patentee's] meeting with [one customer] did not trigger the on-sale bar on the ground that it was a technical, not a sales, meeting, and thus that it need not have been disclosed to the PTO. Prudence would have dictated otherwise, but the requisite evidence of intent to deceive is lacking. [Also], activity [with a foreign manufacturer, which had U.S. customers,] seemingly occurred outside the United States, and its nondisclosure does not reveal an intent to deceive.<sup>172</sup>

Second, the evidence showed that the inventor and his attorney did not become aware of the Dunlop paper until after the patent issued. Finally, the "state of the art" declaration, though "more troubling," fell "short of providing an inference of an intent to mislead

170. *Id.* at 1583.

171. *Id.* at 1584.

172. *Id.* at 1584-85.

the PTO."<sup>173</sup>

While the statements in the affidavit are true, as [the patentee] asserts, this alone does not negate a finding of inequitable conduct, since truthful statements can be crafted in a misleading manner through intentional omission of particular relevant facts. However, there is no evidence of intentional omission of relevant facts in the affidavit and, in particular, no evidence that [the director] in fact knew of [the] Dunlop [reference].<sup>174</sup>

In a deposition, the director testified that "he did not recall seeing the copy of [the reference] on which his name was handwritten as part of a circulation list."<sup>175</sup>

The Federal Circuit ended with a rebuke:

Our conclusion does not mean, however, that we condone [the patentee's] conduct in prosecuting the . . . patents. Barely dodging a bullet based on our deference to a trial court's decision on the factual question of intent and on a matter of equity does not merit approval or justify complacency. [The patentee's] conduct shows a pattern of careless patent prosecution. It has led to the grant of a patent which is invalid over a withheld reference. While we have not reviewed the holding of invalidity based upon the on-sale bar, there certainly was a close question concerning that uncited event. The [director's] affidavit evidences questionable conduct, considering that [his] name was on a circulation list for [the reference] and that he stated in his affidavit that he was responsible for knowing the literature on aircraft brakes and that he had never seen a brake assembly as described and shown in the . . . patents. Submission of careless statements under oath deserves criticism . . . .<sup>176</sup>

In *Nordberg, Inc. v. Telsmith, Inc.*,<sup>177</sup> the facts were similar to those in *B.F. Goodrich*. The patent concerned a gyratory rock crusher. The district court held that the patent was invalid based on: (1) the patentee Nordberg's public use of the claimed invention at a quarry owned and operated by another party (Tanner) more than one year before the filing date of the patent application, and (2) obviousness over the prior art, including the patentee's own prior Saunders patent. But the district court found no inequitable conduct in the pat-

173. *Id.* at 1585.

174. *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1585 (Fed. Cir. 1996).

175. *Id.*

176. *Id.*

177. *Nordberg, Inc. v. Telsmith, Inc.*, 82 F.3d 394 (Fed. Cir. 1996).

entee's failure to disclose the Saunders patent or the public use bar. The patentee's "employees who were under a duty of disclosure, including those who prosecuted the [patent in suit] were unaware of the existence of the [prior art] Saunders patent during prosecution."<sup>178</sup>

The "relevant" employees of the patentee did not conceal the Tanner use from the PTO with the intent to mislead even though an internal memorandum of the patentee stated:

Since the machine has been put in the field, even though a confidentiality exists between ourselves and Tanner, it could be construed because of the relatively open location near the airport and the free visiting by various dealer personnel that the machine may not be patentable in the absolute novelty countries because of disclosure. This may be a negative factor in the potential and value for licensing the machine to our present licensees or for providing initial advantage to the marketing efforts of our overseas locations once the machine becomes a product.<sup>179</sup>

The Federal Circuit affirmed. First, as to the failure to disclose the on-sale bar, the memorandum stating that the use "might pose patentability problems 'in absolute novelty' countries"<sup>180</sup> did not compel the inference that the patentee knew that the public use was material prior art. Because the memorandum referred to a confidentiality agreement between the patentee and Tanner, "it supports, rather than undermines, the district court's finding that the relevant Nordberg employees believed in good faith that the Tanner use occurred under a confidentiality agreement and therefore was not material prior art. Furthermore, since the United States is not an 'absolute novelty' country, the statement that the invention 'may not be patentable in the absolute novelty countries' is not necessarily inconsistent with, let alone sufficient to establish clear error in, the court's finding that [the patentee] believed that the Tanner use was not material prior art."<sup>181</sup>

Second, as to the failure to disclose the patentee's own prior art reference patent ("Saunders"), there could be no intent to deceive as to the undisclosed patent because the persons responsible for the patent prosecution did not actually know of the reference patent.

Although a copy of the Saunders patent was in [the patentee's] files, the files contained several hundred patents and there was no

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178. *Id.* at 396.

179. *Id.* at 397.

180. *Id.* at 396.

181. *Id.* at 398.



showing that any [patentee] employee actually searched the files and found a copy of the Saunders patent during the pendency of the . . . application [for the patent in suit]. Moreover, the unrebutted testimony of [the patentee's] in-house patent counsel indicated that regular searching of in-house prior art files began only recently, after the prosecution of the . . . patent[-in-suit].<sup>182</sup>

The appellants, citing to *Molins PLC* and *FMC Corp*, sought: to overcome the fatal lack of evidence that the relevant [patentee] employees knew of the Saunders patent's existence by contending that "Federal Circuit precedent does not require proof of actual knowledge of the withheld prior art, but only . . . proof that the applicant or its representatives 'should have known of the art or information.'" <sup>183</sup>

The court rejected this argument:

We long ago rejected this contention, *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1362, 220 USPQ 763, 772 (Fed. Cir.) ("Nor does an applicant for patent, who has no duty to conduct a prior art search, have an obligation to disclose any art of which, in the [district] court's words, he 'reasonably should be aware.'") . . . and neither *FMC Corp.* nor *Molins PLC* held to the contrary. Indeed, our decision in *FMC* . . . is directly to the contrary. There was no dispute in that case that the patentee knew of the undisclosed information's existence; only knowledge of the information's materiality was in dispute . . . After noting that proof that the applicant knew of a reference's materiality "may be rebutted by a showing that . . . [the] applicant did not know of that art or information," we discussed the "should have known" standard in connection with the reference's materiality:

Applicant must be chargeable with knowledge of the existence of the prior art or information, for it is impossible to disclose the unknown. Similarly, an applicant must be chargeable with knowledge of the materiality of the art or information; yet an applicant who knew of the art or information cannot intentionally avoid learning of its materiality through gross negligence, i.e., it may be found that the applicant "should have known" of that materiality.

Similarly, in *Molins PLC*, we simply observed that "[o]ne who alleges inequitable conduct arising from a failure to disclose prior art must offer clear and convincing proof of," *inter alia*, "knowledge

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182. Nordberg, Inc. v. Telsmith, Inc., 82 F.3d 394, 397 (Fed. Cir. 1996).

183. *Id.*

chargeable to the applicant of that prior art." It was undisputed that the applicant in *Molins PLC* knew of the existence of the undisclosed references.<sup>184</sup>

After reading cases such as *Nordberg* and *B.F. Goodrich*, a cynical observer might conclude that patent law encourages ignorance and sloth. Inventors and companies and their patent attorneys who do not keep abreast of the state of the art and conduct no prior art searches are less likely to be credibly charged with inequitable conduct because they have no duty to disclose that which they do not know. Of course, this may make it more difficult to obtain valid patents and avoid infringement. But the cynic might suggest that companies can have their cake and eat it too by carefully segmenting their patent operations, having some employees keep abreast of the state of the art but screening them off from the inventors and attorneys who are substantively involved in prosecuting applications.<sup>185</sup> There is indeed an odd tension in the law of inequitable conduct, which on the one hand emphasizes a duty of candor and full disclosure of material information but on the other hand recognizes no duty to search, apparently not even to search one's own patent portfolio, to discover easily accessible material information.

#### IV. CONCLUSION: SOME SUGGESTIONS FOR REFORM

Reviewing the intricacies of the law on best mode concealment and the duty of candor in patent procurement (inequitable conduct) and case examples of the application of these doctrines leads one to conclude that these requirements have strong positive and negative effects on the patent system. These effects are similar to those encountered in other areas of legal regulation of commercial conduct, such as product design and liability, and securities regulation. The positive effect is that the severe sanction for violating the best mode and duty of candor requirements, nullification of patent rights, inevitably creates substantial incentives for those seeking patents to do so with care to comply with full disclosure requirements, thus furthering the policy objectives of those requirements. Yet, because the sanction benefits private commercial interests, it tends to be asserted excessively, increasing uncertainty and cost in patent enforcement, thus retarding the overall policies supporting the patent system, which include providing incentives for research and development and the dis-

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184. *Id.* (citations omitted)

185. The recent *Glaxo* decision suggests that such a strategy may also be effective in avoiding the best mode disclosure requirement. See text accompanying *supra* note 69.

closure of new technology.

One is tempted to suggest that the best mode and inequitable conduct concepts should be completely reviewed and revised, but experience over the past few years has shown that substantial reform of any significant feature of U.S. patent law is politically difficult. Also, major changes in these requirements should probably be a part of a more comprehensive revision of the U.S. patent law, one on the scale of the 1976 Copyright Revision Act.

But there may be modest, noncontroversial procedural reforms of the "truth in patents" doctrines, especially the best mode requirement, that would preserve their policy substance but decrease the costs and uncertainty that they impose on the processes of patent procurement and enforcement. As just one example, the timing requirement for best mode compliance would seem to be needless and deleteriously rigid. Filing a patent application to obtain a "filing date" is a basic and critical feature of the United States and international patent system. But there seems to be no good reason why the best mode disclosure requirement, which by definition goes beyond a description of the invention and a "enabling" disclosure of how to make and use it, must be measured as of, and be complied with on, the filing date. This is especially the case with the large category of "inventions" that are not discrete events, singular flashes of creativity, but rather an organic set of ideas, growing and changing over time. To pinpoint one day, as the sole measure for best mode compliance, is truly arbitrary. The public policy benefit from best mode disclosure comes when the United States patent issues (or, as is common, a corresponding foreign application with the same disclosure is made available eighteen months after filing under patent procedures in Europe, Japan, and other countries.) To require full best mode disclosure in the application submitted on the original filing date necessarily must cause delays in filing with potential loss of priority rights, especially outside the United States, where a "first-to-file" priority rule prevails.<sup>186</sup> The United States missed the opportunity to soften the best mode requirement's timing rigidity when it introduced the "provisional application" procedure in 1996.<sup>187</sup> Various flexible alternatives for allowing a post-filing addition of a "best

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186. The priority rules on patent rights create ample incentives for inventors to disclose valuable "best modes," even if there were no best mode requirement. A danger in omitting any mode that has commercial value is that someone else will later file an application and obtain a patent claiming it.

187. See 3 DONALD S. CHISUM, *PATENTS* § 11.02[1][g] (1996).

mode” requirement are possible. The object should be a procedure for inventors and companies that is easier and less error-prone than the current rule but retains the substance of the disclosure obligation. For example, if the contemplated best mode has changed over time, the inventor could be allowed to choose any best mode, either that on the original filing date, as under current law, or at a later point in time, perhaps up to a year after the original filing date. The mode could be added by a continuation-in-part application filed at any time.<sup>188</sup> Disclosing later modes could only benefit the public disclosure policy because later developed modes are typically more sophisticated and developed than earlier ones.<sup>189</sup> Because the decision on best mode is made later in time, when the commercial value of the invention may be clearer and the applicant may have a better estimate of the breadth of the claims the patent examiner will allow, the applicant could make a better informed decision about whether obtaining the patent is worth the pain of disclosing potential trade secrets. If the invention has become embedded in publicly-accessible commercial processes and products, the inventor could simply adopt those. Other procedures may be equal or superior in allowing inventors to avoid inadvertent best mode violations and to create a clear public record that will forestall validity challenges by accused infringers.

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188. See 3 DONALD S. CHISUM, *PATENTS* § 13.04[2] (1996).

189. An argument that a procedure for adding a best mode disclosure later might induce some inventors to deliberately withhold the best mode if the original filing misses the point. Deliberate “concealment” at the initial procedural stage would be perfectly proper. If the inventor-applicant later decides not to add a best mode disclosure, that will create a potential best mode violation, which would be as easy or easier to detect in litigation than violations under the current filing-date only rule.

