

4-1-2003

Preserving the Presumption of Patent Validity: An Alternative to Outsourcing the U.S. Patent Examiner's Prior Art Search

John A. Jeffery

Follow this and additional works at: <https://scholarship.law.edu/lawreview>

Recommended Citation

John A. Jeffery, *Preserving the Presumption of Patent Validity: An Alternative to Outsourcing the U.S. Patent Examiner's Prior Art Search*, 52 Cath. U. L. Rev. 761 (2003).
Available at: <https://scholarship.law.edu/lawreview/vol52/iss3/7>

This Comments is brought to you for free and open access by CUA Law Scholarship Repository. It has been accepted for inclusion in Catholic University Law Review by an authorized editor of CUA Law Scholarship Repository. For more information, please contact edinger@law.edu.

PRESERVING THE PRESUMPTION OF PATENT VALIDITY: AN ALTERNATIVE TO OUTSOURCING THE U.S. PATENT EXAMINER'S PRIOR ART SEARCH

John A. Jeffery⁺

The United States Patent & Trademark Office (USPTO) performs a rigorous examination before issuing each patent.¹ During this process, USPTO patent examiners analyze the claimed subject matter of the invention, determine the scope and content of the prior art, and ultimately decide whether the claimed invention is patentable.² This process requires each examiner to search and retrieve documents on which to base the patentability decision.³

⁺ J.D. Candidate, May 2004, The Catholic University of America, Columbus School of Law. This Comment was selected as the runner-up for the 2003 Honorable William C. Conner Intellectual Property Writing Competition sponsored by the New York Intellectual Property Law Association. I would like to thank Richard Gibson, Conrad DeWitte, Matthew Maddox, Tanya Lennon, Sean Ruff, and Dori Pagé Antonetti for their helpful comments, suggestions, and sharp attention to detail that contributed immeasurably to this effort. I would also like to thank Professor John Thomas of Georgetown University Law Center for his legal expertise, insight, and thoughtful assistance for which I will always be grateful. Finally, I wish to thank my wife, Linda, whose patience, love, and understanding while completing this work mean more to me than words can express.

1. See 35 U.S.C. § 131 (2000); 37 C.F.R. § 1.104 (2002).

2. See Notice of Public Hearing and Request for Comments on Issues Related to the Identification of Prior Art During the Examination of a Patent Application, 64 Fed. Reg. 28,803, 28,804 (May 27, 1999) [hereinafter USPTO Public Hearing on Prior Art].

3. *Id.* According to the USPTO:

Patent examiners can readily search classified paper files, microfilm, and CD-ROMs, comprising United States patents, foreign patent documents, Patent Cooperation Treaty (PCT) publications, as well as a large selection of nonpatent literature, including technical journals, books, magazines, encyclopedias, product catalogues, and industry newsletters. In addition, patent examiners have access to hundreds of in-house and commercial online databases providing convenient access, from their desktop, to millions of United States and foreign patent and nonpatent literature documents.

Id.; see also Lisa Fried, *Q & A: PTO Chief: Q. Todd Dickinson Talks About Changes in the Office*, N.Y.L.J., Mar. 23, 2000, at 5 (quoting then-USPTO Director Q. Todd Dickinson who stated that in 2000 examiners had "access to over 900 databases," which provided better access to prior art than ever before).

Examiners have conducted prior art searches as part of the examination process for over 165 years.⁴ The USPTO, however, has recently made an unprecedented proposal to outsource prior art searches to commercial vendors in *The 21st Century Strategic Plan (Strategic Plan)*.⁵ Many in the intellectual property community are concerned that outsourcing prior art searches is not in the public interest and is detrimental to the patent system.⁶ In fact, some critics have

4. See Nancy J. Linck et al., *A New Patent Examination System for the New Millennium*, 35 HOUS. L. REV. 305, 306-07 (1998) (noting that as of 1998, the U.S. patent examination system, in which "patent applications have been examined for novelty, usefulness, and inventiveness," served the nation well for over 160 years).

5. See U.S. PATENT & TRADEMARK OFFICE (USPTO), THE 21ST CENTURY STRATEGIC PLAN 13 (Feb. 3, 2003), available at http://www.uspto.gov/web/offices/com/strat21/stratplan_03feb2003.pdf (last modified Apr. 3, 2003). Initially, the *Strategic Plan* called for the applicant to select the contractor. However, under the revised *Strategic Plan*, the USPTO selects the contractor. See *Legislative Hearing on H.R. 1561, "United States Patent and Trademark Fee Modernization Act of 2003," Before the Subcomm. on Courts, the Internet, and Intellectual Property of the House Comm. on the Judiciary*, 107th Cong. (2003), available at <http://www.house.gov/judiciary/rogan040303.htm> (last visited Apr. 18, 2003) (statement of James E. Rogan, Under Secretary of Commerce for Intellectual Property and Director of the USPTO); see also *President Seeks More Funding, Less Diversion for PTO*, WASH. INTERNET DAILY, Feb. 5, 2003, at 1; Tamara Loomis, *Patents and Trademarks Opposition Has Scaled Back Overhaul of PTO*, N.Y.L.J., Feb. 13, 2003, at 5.

6. Maureen Sirhal, *Daily Briefing: PTO Chief Unveils Plan To Overhaul Patent Reviews*, GOV'T EXECUTIVE (June 3, 2002), at <http://www.govexec.com/dailyfed/0602/060302td1.htm>; see also Tanya N. Ballard, *Daily Briefing: Patent Examiners Reject Proposal To Outsource Patent Searches*, GOV'T EXECUTIVE (July 29, 2002), at <http://www.govexec.com/dailyfed/0702/072902t1.htm>. Outsourcing prior art searches has also concerned several members of the Patent Information Users Group (PIUG), a non-profit organization for professionals specializing in the retrieval, analysis, and dissemination of patent information. See Nancy Lambert, *That Was the Year That Was—Patents 2002*, SEARCHER, Apr. 2003, at 25. Lambert summarizes five concerns expressed by some PIUG members:

1. The certification might be administered by people who don't know what they're doing and/or use inappropriate criteria.
2. The certification process might favor large search firms vs. small firms and independent patent professionals, since the PTO might not want to go through the certification process for just one or two searchers.
3. Because companies filing patents would not be permitted to submit search reports prepared by their in-house searchers (due to possible conflict of interest), the in-house searchers—much of PIUG membership—might face sudden job insecurity.
4. The examiners remaining at the PTO might lose their in-depth knowledge of PTO patent classifications if they no longer perform searches, to the detriment of U.S. classifications' continued development and the reclassification of old patents.
5. PTO management may just be trying to reduce costs by reducing the number of examiners, at the same time increasing PTO fees, so as to permit Congress to raid even more of those fees for other purposes.

characterized outsourcing prior art searches as putting “the fox in charge of the henhouse.”⁷

Some activities are ideally suited for outsourcing to the private sector.⁸ However, because a patent examiner’s decision regarding the patentability of an invention disclosed in an application depends on the results of the prior art search,⁹ outsourcing the prior art search raises two important questions. First, is the prior art search function so closely intertwined with the examiner’s quasi-judicial patentability determination so as to preclude its separation from the patentability determination? Second, is the prior art search, like the ultimate patentability determination, such an inherent governmental function as to prevent its outsourcing?

Anyone who prepares or prosecutes a patent application has a duty of disclosure, candor, and good faith.¹⁰ Rule 56 of the USPTO Regulations dictates who has the duty to disclose,¹¹ to whom the duty of disclosure is owed,¹² and the particular information required to be disclosed.¹³ To

Id.

7. Sirhal, *supra* note 6 (quoting Ronald Stern, President of the Patent Office Professional Association); *see also* U.S. Patent & Trademark Office, *Frequently Asked Questions – Compiled from Examiner E-mails to Under Secretary Rogan*, at Q-10, (requiring that an applicant must obtain a search report from only a Certified Search Service “to avoid a conflict of interest and [the] so-called ‘fox-in-the-henhouse’ situation”), at <http://www.uspto.gov/web/offices/com/strat2001/faqcompiled.htm> (last modified Dec. 5, 2002) [hereinafter *Frequently Asked Questions*].

8. *See* Office of Management & Budget, Circular No. A-76, at 2, Attachment A, Aug. 4, 1983 (Rev. 1999).

9. *See* John L. Welsh, *Searching—To Find Art*, G-667 PRACTICING LAW INSTITUTE, PREPARING PATENT LEGAL OPINIONS 71, 75 (2001) (concluding that the patentability opinion is “only as good as the search results it is based upon”); *see also* U.S. Patent and Trademark Office: *Fee Schedule Adjustment and Agency Reform, Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Property of the House Comm. on the Judiciary*, 107th Cong. 91 (2002) [hereinafter *House Hearing on USPTO Reform*] (statement of Ronald J. Stern, President, Patent Office Professional Association) (“The patentability determination can only be as good as the prior art on which that patentability determination is founded.”); *Patents: Improving Quality and Curing Defects, Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Property of the House Comm. on the Judiciary*, 107th Cong. 22 (2001) [hereinafter *House Hearing on Patent Quality*] (statement of Jeffrey P. Kushan, Partner, Powell, Goldstein, Frazer, & Murphy, LLP) (“[W]hen a properly trained PTO examiner has all relevant information, he or she can make an accurate conclusion on patentability of an invention.”).

10. 37 C.F.R. § 1.56(a) (2002).

11. *Id.* § 1.56(c).

12. *Id.* § 1.56(a).

13. *Id.*

comply with Rule 56, applicants typically submit all relevant documents to the USPTO for the examiner's consideration.¹⁴

Although applicants need to disclose known relevant documents, they do not need to conduct a prior art search.¹⁵ Therefore, examiners must conduct their own prior art searches independent of applicants' prior art disclosures.¹⁶ Thus, both examiners and applicants "share the responsibility of ensuring that pertinent prior art is . . . considered during examination."¹⁷ If adopted, the USPTO's *Strategic Plan* would shift these relative responsibilities by requiring the examiner to rely exclusively on a prior art search conducted by a commercial vendor.¹⁸ Such a shift in relative responsibilities is both legally and practically problematic.¹⁹ Because the patentability decision is essentially dictated by the prior art search, a private search firm would potentially possess an unprecedented ability to influence the patentability decision.²⁰

Part I of this Comment reviews the presumption of validity accorded to granted U.S. patents and describes both the patent examination process and the search for relevant prior art. Part II explores recent developments in Europe and the United States regarding the prior art search function. Part III argues that the prior art search is inherently part of patent examination and, therefore, cannot be appropriately outsourced. Moreover, this Part argues that the prior art search is inherently a governmental function so intimately related to the public interest as to require government employees to perform the search.

14. *Id.* §§ 1.97-1.98; see also *House Hearing on Patent Quality*, *supra* note 9, at 21 (statement of Jeffrey P. Kushan, Partner, Powell, Goldstein, Frazer & Murphy, LLP) (noting that the reason applicants provide the USPTO with all relevant prior art prior to examination is that "[t]he fully informed opinions of an [e]xaminer are worth far more than an opinion on an incomplete record").

15. See U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 609, at 600-18 (U.S. Dep't of Commerce, U.S. Patent & Trademark Office, 8th ed., 2001) ("There is no requirement that an applicant for a patent make a patentability search."); see also *FMC Corp. v. Hennessy Indus., Inc.*, 836 F.2d 521, 526 n.6 (Fed. Cir. 1987) ("As a general rule, there is no duty to conduct a prior art search, and thus there is no duty to disclose art of which an applicant could have been aware."). *But see* John A. Diener, *Lightening the Load of the Patent Examiner*, 47 J. PAT. OFF. SOC'Y 148, 151 (1965) (noting that "[g]enerally, no worthwhile application for patent is filed without a search [of] previously acquired knowledge of the prior art").

16. See 37 C.F.R. § 1.104(a)(1) (2002) (mandating that the examiner "make a thorough investigation of the available prior art relating to the subject matter of the claimed invention"). See generally MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 904.02 (requiring a thorough search of the prior art as part of the examination of a patent application).

17. USPTO Public Hearing on Prior Art, *supra* note 2, at 28,804.

18. See *infra* Part II.B.

19. See *infra* Part III.

20. See *infra* Part III.

Finally, Part IV provides an alternative to outsourcing the examiner's prior art search by suggesting a three-pronged search approach that combines the relative expertise of examiners, private search firms, and state-of-the-art automated search tools to obtain the most comprehensive search results practicable.

I. THE "STRONG" PRESUMPTION OF PATENT VALIDITY: COURTS' DEFERENCE TO USPTO TECHNICAL EXPERTISE

A. *The Presumption of Validity of Granted U.S. Patents*

U.S. patents are presumed valid.²¹ Because courts defer to the USPTO's special technical expertise²² and have faith in the examination process,²³ challengers must show a patent is invalid by clear and convincing evidence.²⁴ The courts' deference to the integrity of the examination process, however, is predicated on the examiner's consideration of the most pertinent prior art during examination.²⁵ Thus,

21. 35 U.S.C. § 282 (2000).

22. *Conopco, Inc. v. May Dept. Stores Co.*, 784 F.Supp. 648, 669 (E.D. Mo. 1992), *rev'd on other grounds*, 46 F.3d 1556 (Fed. Cir. 1994); *see also* *Bolkcom v. Carborundum Co.*, 523 F.2d 492, 498 (6th Cir. 1975) (noting that every patent issued by the USPTO possesses an initial presumption of validity, which is justified by patent law complexities and USPTO expertise). Qualifications of examiners vary widely among individual examiners and among technologies. *See* Scott Wolinsky, *An Inside Look at the Patent Examination Process*, METRO. CORP. COUNS., Sept. 2002, at 18. One commentator noted, "All examining positions require at least a bachelor's degree in computer science, physical science or engineering, and varying levels of professional engineering experience or graduate study." *Id.* The USPTO also hires recent law school graduates and people with doctoral degrees. *Id.*

23. John Kasdan, *Obviousness and New Technologies*, 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 159, 183 (1999).

24. *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1323 (Fed. Cir. 1999). *But see* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1529 (2001) (arguing that the presumption of validity should be rebutted by a preponderance of the evidence rather than clear and convincing evidence).

25. *See* John L. King, *Patent Examination Procedures as Inputs to Patent Quality*, at 19, in NATIONAL RESEARCH COUNCIL, PATENTS IN THE KNOWLEDGE-BASED ECONOMY (Wesley M. Cohen & Stephen A. Merrill eds., forthcoming 2003) (concluding that "the quality of patent examination affects the validity of issued patents"), available at http://www7.nationalacademies.org/step/King_paper.doc (last visited Jan. 31, 2003); *see also* *House Hearing on Patent Quality*, *supra* note 9, at 55 (statement of James F. Cottone, President, National Intellectual Property Researchers Association) (noting that a quality examination results when the examiner considers a complete set of all pertinent references, typically between 1,000 to 3,000 documents depending on the technology and particular application); Howard M. Eisenberg, *Patent Law You Can Use: Patentability Searching* (2000), at 3-4 (noting that a challenger has a heavy burden to overcome a patent's presumption of validity based on prior art considered during examination), available at http://www.yale.edu/ocr/invent_guidelines/docs/patentability.pdf (last visited

if the USPTO does not consider the most pertinent prior art, the validity presumption is considerably weakened.²⁶

Challengers must meet the clear and convincing evidentiary standard in order to undermine the validity of a granted patent.²⁷ When rejecting a patent application prior to a patent's grant, however, the USPTO must meet the standard of preponderance of the evidence.²⁸ There are two reasons for this inconsistency. In a pending application, the situation is fluid; the applicant may freely amend or add claims and engages in *ex parte* prosecution with the agency.²⁹ After the patent has been granted, however, prosecution is closed, and the presumption of validity effectively shifts the burden of persuasion to a challenger to prove the patent's invalidity.³⁰ Although some commentators have argued that

Jan. 31, 2003); *Al-Site*, 174 F.3d at 1323 (noting the validity presumption "carries with it a presumption that the [e]xaminer did his duty and knew what claims he was allowing").

26. See *Monroe Auto Equip. Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 413 (6th Cir. 1964); see also *Duty of Disclosure*, 57 Fed. Reg. 2021, 2024 (Jan. 17, 1992) (to be codified at 37 C.F.R. pts. 1 & 10) ("If the [USPTO] does not have needed information, meaningful examination of patent applications will take place for the first time in an infringement case before a district court."); Kasdan, *supra* note 23, at 183 (concluding that if the USPTO knows that its examination is below its normal standard, such examinations should not receive such a strong presumption of validity); Iain Cockburn et al., *Are All Patent Examiners Equal? The Impact of Examiners on Patent Characteristics and Litigation Outcomes*, in NATIONAL RESEARCH COUNCIL, PATENTS IN THE KNOWLEDGE-BASED ECONOMY 21 (Wesley M. Cohen & Stephen A. Merrill eds., forthcoming 2003) (noting that the overall probability of a court upholding validity is approximately fifty percent depending on the technological area and the age of the patent), available at http://www7.nationalacademies.org/step/Stern_et_al_Paper.pdf (last visited Jan. 31, 2003); *Ashcroft v. Paper Mate Mfg. Co.*, 434 F.2d 910, 914 (9th Cir. 1970) (noting that the presumption of validity "is merely an aid to inquiry and does not automatically foreclose thought and analysis"). Cf. *Contour Chair Lounge Co. v. True-Fit Chair, Inc.*, 648 F. Supp. 704, 716 (E.D. Mo. 1986) ("Introduction of prior art not considered by the examiner can help the validity challenger carry its burdens . . . but it does not 'weaken' or otherwise affect the statutory presumption of validity.").

27. See, e.g., *In re Caveney*, 761 F.2d 671, 674 (Fed. Cir. 1985).

28. *Id.*

29. See, e.g., *In re Etter*, 756 F.2d 852, 858-59 (Fed. Cir. 1985). *Ex parte* prosecution involves: (1) an initial patentability determination following examination of the application; (2) notification of the applicant of the decision, which begins a fixed period of time for the applicant to respond by submitting arguments and/or claim amendments; and (3) a second patentability determination of the application as amended and in view of the arguments presented. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 706, at 700-17, 700-18; see also 37 C.F.R. §§ 1.104(a)(2), 1.111, 1.134, (2002). Usually, the second patentability determination is made final, thus limiting the applicant's ability to amend the application. See *Cockburn*, *supra* note 26, at 7. At this stage, however, the applicant may appeal the decision, abandon the application, or elect to prosecute the application further by filing a continuing application. See *id.*

30. See, e.g., *Etter*, 756 F.2d at 858-59. But see *Lemley*, *supra* note 24, at 1529 (arguing that the presumption of validity should be rebutted by the preponderance of evidence instead of clear and convincing evidence).

imposing a higher evidentiary standard for granted patents is improper for issues not considered by the USPTO,³¹ the validity presumption nevertheless remains a useful procedural device by providing substantial deference to USPTO patentability determinations.

B. Patent Examination: A Quasi-Judicial Process

The first U.S. patent examination system was implemented after passage of the Patent Act of 1790.³² Modeled after the French system, the U.S. system entrusted examination to cabinet-level officers who examined applications on a part-time basis.³³ Due in part to dissatisfaction with the quality of the part-time examiners' work, however, this system was soon replaced with a registration system.³⁴ Lasting only a few decades, the registration system was a dismal failure³⁵ and was abandoned in 1836 when Congress reestablished the examination system.³⁶ Examination became a full-time public service

31. See Lemley, *supra* note 24, at 1528-29; see also Charles E. Phipps, *The Presumption of Administrative Correctness: The Proper Basis for the Clear and Convincing Evidence Standard*, 10 FED. CIR. B.J. 143, 149-50 (2000) (arguing that the clear and convincing standard is inappropriate in cases where the presumption of administrative correctness does not apply).

32. Frank D. Prager, *The Examination of Inventions from the Middle Ages to 1836*, 46 J. PAT. OFF. SOC'Y 268, 289 (1964).

33. *Id.*; see also B.E. Lanham & J. Leibowitz, *Classification, Searching and Mechanization in the U.S. Patent Office*, 40 J. PAT. OFF. SOC'Y 86, 86-87 (1958) (noting that patent classification was unnecessary in early examination efforts because the prior art search required by the 1790 Act was limited to relatively few patents and books).

34. See Prager, *supra* note 32, at 289; see also John T. Roberts, *A Reappraisal of the American System of Patent Examining*, 48 J. PAT. OFF. SOC'Y 156, 164 (1966) (noting that another reason for replacing the examination system with the registration system was the shortage of formally educated people to examine applications).

35. Prager, *supra* note 32, at 289; see also Roberts, *supra* note 34, at 166-67 (quoting an 1836 Congressional report explaining that the registration system's failure was due to (1) the granting of a considerable number of invalid patents, (2) the flooding of patent monopolies, (3) the alarming rise in litigation, and (4) the increase in fraud on the Patent Office). See generally Lemley, *supra* note 24, at 1527 (noting that one of the advantages of an examination system over a registration system is that it requires patentees to restrict the scope of their claims, thereby preventing overly broad claims from covering entire industries); Linck et al., *supra* note 4, at 313 (noting that abandoning examination altogether would overburden the courts and unreasonably increase costs).

36. Prager, *supra* note 32, at 289-90. See generally Michael N. Meller, *Treating the Cause and Not the Symptoms: A Case for Delayed Examination*, 46 J. PAT. OFF. SOC'Y 247, 254-55 (1964) (distinguishing patent examination systems from registration systems by noting that, unlike registration systems, examination systems attach a presumption of validity to patents in view of patent examiners searching, evaluating, and thoroughly deliberating the merits of the invention).

occupation performed by professionals specializing in reviewing applications.³⁷

Today, the examination system is mandated by statute, which directs the USPTO to “cause an examination to be made” and to issue a patent if the applicant is so entitled under the law.³⁸ While the term “examination” is not further defined in the statute, USPTO regulations detail the examination process.³⁹ Rule 104 requires the examiner to study the patent application, investigate “the available prior art relating to the subject matter of the claimed invention,” and ensure compliance with applicable law, patentability, and matters of form.⁴⁰ Based on the preponderance of the evidence,⁴¹ the examiner decides whether the invention is new, useful, novel, and nonobvious under established statutory standards.⁴² Patent examiners have been characterized as quasi-judicial officials who must possess both technical and legal skills to perform their duties.⁴³ This quasi-judicial function has effectively served its purpose since the inception of the modern examination system.⁴⁴

The USPTO has noted that “[l]ocating relevant prior art is one of the most important aspects of the patent examining process.”⁴⁵ Indeed, the integrity of the examination system depends on the thoroughness of the

37. Prager, *supra* note 32, at 290. Indeed, the first patent examiner hired in 1836 was intimately familiar with the prior art collection at that time and was directed to apply prior art to reject applications. *See id.*

38. 35 U.S.C. § 131 (2000). As noted by one commentator, the modern patent system is basically equivalent to that of 1836. *See* Meller, *supra* note 36, at 257.

39. 37 C.F.R. § 1.104 (2002). *Cf.* BLACK'S LAW DICTIONARY 387-88 (6th ed. 1991) (defining the term examination in the invention context as “[a]n inquiry made at the patent-office, upon application for a patent, into the novelty and utility of the alleged invention, and as to its interfering with any other patented invention”).

40. 37 C.F.R. § 1.104(a)(1) (2002).

41. *See, e.g., In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (“[P]atentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument.”).

42. *See, e.g., Lee Pharms. v. Kreps*, 577 F.2d 610, 613 (9th Cir. 1978). *See generally* 35 U.S.C. §§ 101-103 (2000) (discussing the specific determinations an examiner must make for a patentability decision).

43. *W. Elec. Co. v. Piezo Tech., Inc.*, 860 F.2d 428, 433 (Fed. Cir. 1988) (“It is no more appropriate to question a patent examiner’s technical expertise than it is to question the quality of a judge’s law school education or judicial experience.”); *see also* discussion *supra* note 22. *See generally* *Butterworth v. United States ex rel Hoe*, 112 U.S. 50, 67 (1884) (noting the quasi-judicial nature of the patent examiner’s position).

44. *See Outline of the History of the United States Patent Office*, 18 J. PAT. OFF. SOC’Y 1, 216 (1936). *See generally* Linck et al., *supra* note 4, at 306-07 (1998) (noting that as of 1998, the U.S. patent examination system, in which “patent applications have been examined for novelty, usefulness, and inventiveness,” served the nation well for over 160 years).

45. USPTO Public Hearing on Prior Art, *supra* note 2, at 28,804.

prior art search associated with every application.⁴⁶ Accordingly, under Rule 104, the examiner must thoroughly investigate the prior art relating to the claimed invention⁴⁷ and consider all subject matter pertinent to the disclosure.⁴⁸ Thus, the examiner is interested in identical subject matter as well as all related and analogous content.⁴⁹ Throughout the search, the examiner must consider the scope and approach of the search while studying each document.⁵⁰ Thus, as the examiner uncovers art during the search, he or she can modify the search accordingly⁵¹ and, if necessary, identify additional search areas to expand the search.⁵²

As noted in a 1961 Judiciary Committee study of the examination process, the examiner must use sound judgment in assessing the extent of the prior art search.⁵³ Moreover, the Committee emphasized that examiners obtain their “specialized knowledge” only through experience and that such “specialized knowledge” is critical to understanding prior

46. Arthur Schwartz, *The Effect of Mechanized Searching on Patent Practice and Litigation*, 44 J. PAT. OFF. SOC'Y 803, 803-04 (1962) (quoting a 1962 address by David L. Ladd, Commissioner of Patents, in which Commissioner Ladd noted that “the validity of any given patent and ultimately the soundness of the examination system depends upon how thoroughly [the] files are searched for each application”); *see also* John R. Allison & Emerson H. Tiller, *Internet Business Method Patents*, in NATIONAL RESEARCH COUNCIL, PATENTS IN THE KNOWLEDGE-BASED ECONOMY 3-4 (Wesley M. Cohen & Stephen A. Merrill eds., forthcoming 2003) (noting that courts most commonly invalidate patents because of prior art that was not before the examiner), *available at* http://www7.nationalacademies.org/step/Tiller_et_al_paper.doc (last visited Jan. 31, 2003).

47. 37 C.F.R. § 1.104(a)(1) (2002). *See generally* USPTO Public Hearing on Prior Art, *supra* note 2, at 28,804 (noting that one of the “most important aspects” of patent examination is locating prior art); Lanham & Leibowitz, *supra* note 33, at 97 (characterizing the patent search as an inquiry into whether there is “a disclosure anywhere of the concept expressed in the claimed subject matter”). *But see* SENATE SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF THE COMM. ON THE JUDICIARY, 86TH CONG., THE EXAMINATION SYSTEM IN THE U.S. PATENT OFFICE, STUDY NO. 29 14 (Comm. Print 1961) [hereinafter S. JUDICIARY COMM. STUDY NO. 29] (noting that the USPTO cannot undertake a “validity search” of several weeks’ duration inspecting every possible publication—no matter how remote).

48. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 904.03, at 900-55. Conducting the search requires the examiner to identify the scope and extent of the search, select the proper search tools, and “determin[e] the appropriate search strategy for each search tool selected.” *Id.* § 904.02, at 900-51. A proper field of search includes the appropriate subclasses in which the claimed subject matter is classified in the U.S. classification system. *Id.* § 904.02(a), at 900-52. As a corollary to conducting an effective classified search, however, experience and familiarity with the individual patents within particular subclasses are essential. *See* S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 12.

49. Lanham & Leibowitz, *supra* note 33, at 88.

50. *See id.*

51. Schwartz, *supra* note 46, at 806.

52. *See* Lanham, *supra* note 33, at 88.

53. S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 14.

art developments and the subject matter of the invention.⁵⁴ The Judiciary Committee also noted that the extent and adequacy of the search depend on the examiner's experience, competency, sufficient patent classification efforts, and work-related pressures.⁵⁵ The Committee concluded that, ultimately, "[t]he examiner's competence and judgment in analyzing the subject matter of the invention, and its possible relationship to prior development, determine[] the extent and quality of the investigation of the prior art."⁵⁶ Thus, the examiner's judgment, competence, and experience are critical factors affecting prior art search quality.

The responsibility of ensuring consideration of pertinent prior art during examination is shared between patent examiners, who must thoroughly search the prior art under Rule 104, and applicants, who must submit information known to them to be material to patentability under Rule 56.⁵⁷ The USPTO recognizes, however, that certain emerging technologies, such as telecommunications and computer-related arts, present unique search challenges because the best prior art exists mainly in non-patent literature that is difficult to access.⁵⁸ The magnitude of the problem and resulting public criticism motivated the USPTO to conduct public hearings on the issue in 1999.⁵⁹

The problem is exacerbated by the limited time available for examiners to conduct the prior art search.⁶⁰ An examiner is allotted an

54. *Id.* at 16-17.

[E]xperience is necessary to obtain a specialized knowledge of the art and also to become familiar with the sources of such knowledge, that is, the prior publications in the particular field. This specialized knowledge is necessary to understand the subject matter of the application and . . . prior art developments.

Id.

55. *Id.* at 14-16.

56. *Id.* at 16; *see also* R. Lee Grantham, *The PTO's 21st Century Strategic Plan: A Review and Comments Regarding Quality and the Prior Art Function*, INTELL. PROP. TODAY, Nov. 2002, at 6-8 ("Patent searching is a qualitative activity . . . [requiring] sorting through hundreds of printed documents and selecting a handful that, solely in the searcher's judgment, contain salient features [that] suggest similarity to the inventor's idea.").

57. USPTO Public Hearing on Prior Art, *supra* note 2, at 28,804.

58. *See id.* at 28,804-05; *see also* Bruce A. Lehman, *The Leadership of the USA in the Field of Intellectual Property*, BUS. PERSP., Summer/Fall 2001, at 22 (concluding that even with an adequate number of examiners, the USPTO is unable to deal effectively with applications involving business methods and computer software "because it lacks a comprehensive and easily accessible database of non-patent prior art").

59. USPTO Public Hearing on Prior Art, *supra* note 2, at 28,804.

60. *See* John R. Thomas, *Collusion & Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 314 (2001); *see also* S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 16 (noting that because examiners are confronted with the demands of disposing of at least a reasonable number of applications from an increasing backlog, "the examiner necessarily limits his search to the minimum that he

average of between sixteen and seventeen hours for each application,⁶¹ about sixty percent of which is spent on the prior art search.⁶² Additionally, substantial time allotment differences exist among individual examiners due to their seniority and to the technical complexity of their respective disciplines.⁶³ Despite these time constraints, the Intellectual Property Law Section of the American Bar Association (ABA) concluded that U.S. examiners “can perform the best, highest quality searches in the world.”⁶⁴ Conversely, some

considers satisfactory”); Wolinsky, *supra* note 22, at 18 (“Each USPTO examiner is allocated a specific number of hours to spend during the prosecution of a patent application Unlike in a law firm where attorneys bill for each hour worked, patent examiners work on a piecemeal basis whereby the examiner is credited only for the number of applications examined.”); Milton Weissman, *Testimony Before the Senate Judiciary Committee, Subcommittee on Patents, Trademarks, and Copyrights, Relating to S. 1321 (Hart Bill)*, 55 J. PAT. OFF. SOC’Y 604, 606-07 (1973) (quoting a 1918 Assistant Commissioner’s speech addressed to examiners that “[i]f you have to choose between making a less thorough examination and a general and material delay in getting the applications through, it is probably more to the public interest that the prosecution be prompt . . . [and] . . . if your examination is not sufficiently thorough, this is directly the fault of Congress”). Cf. *Carter-Wallace, Inc. v. Davis-Edwards Pharmacal Corp.*, 443 F.2d 867, 887 (2d Cir. 1971) (Mansfield, J., dissenting) (reminding the majority that the lack of Patent Office time and staffing to permit exhaustion of the prior art has not persuaded Congress that there is a problem with the system due to the existence of the statutory presumption of validity).

61. Thomas, *supra* note 60, at 314. Another commentator made the following startling observation:

Examiners have astonishingly little time to spend on each application—on average, a total of eighteen hours, including the time spent reading the application, reading the submitted prior art, searching for and reading prior art in databases accessible to the PTO, comparing that prior art to the application, writing an office action, reading and responding to the response to office action, iterating the last two steps at least one and often more times, conducting an interview with the applicant, and ensuring that the diagrams and claims are in form for allowance.

Lemley, *supra* note 24, at 1496 n.3. In view of the time constraint, Lemley suggests doubling the amount of time allotted to examiners. *See id.* at 1508.

62. Simon M. Newman, *Information Retrieval Research in the U.S. Patent Office*, 42 J. PAT. OFF. SOC’Y 731, 731 (1965).

63. *See* Cockburn, *supra* note 26, at 9 (“[E]xaminers may vary substantially in their effective average ‘approval time.’”).

64. *House Hearing on USPTO Reform*, *supra* note 9, at 49 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association); *see also* Roberts, *supra* note 34, at 190 (noting a study in which many defendants of valid patents generally found no better art than examiners—even after searching areas the examiner seldom considers). *But see* Harold C. Wegner, *International Patent Law Developments*, 4 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 329, 337-38 (1993) (concluding that the European search is “the best in the world” in view of the “brilliant” searches performed by the treaty-based corps of EPO career examiners); Lemley, *supra* note 24, at 1528 (noting that examiners “regularly miss the most relevant prior art”); *House Hearing on Patent Quality*, *supra* note 9, at 61 (statement of Michael K. Kirk, Executive Director,

commentators have harshly criticized the USPTO for issuing patents of allegedly poor quality. Critics cite high examiner turnover,⁶⁵ lack of experience in certain areas (e.g., business methods),⁶⁶ and ignorance of relevant prior art due to time pressure.⁶⁷ Critics have also alleged that examiners give only cursory consideration to non-patent literature in areas where such literature is more important to the prior art search than patents.⁶⁸

In response to such criticism, the USPTO implemented concrete measures to improve search quality, most notably by promulgating Rule 105 in 2000.⁶⁹ In essence, Rule 105 authorizes the examiner to require an applicant to provide any information deemed “reasonably necessary” to examine the application properly.⁷⁰ In theory, this requirement ensures

American Intellectual Property Law Association) (“[E]xaminers sometimes don’t find the best prior art, and sometimes when they do, their judgments are little bit short.”).

65. Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577, 606 (1999); see also Harold C. Wegner, *Patent Simplification Sans Patent Fraud*, 20 AM. INTELL. PROP. L. ASS’N Q.J. 211, 222 (1992) (noting that the status, salary, and perquisites of EPO examiners lead to career employees unlike the relatively high turnover encountered with U.S. examiners).

66. David Schumann, *Obviousness with Business Methods*, 56 U. MIAMI L. REV. 727, 764 (2002).

67. *Id.* at 765.

68. Merges, *supra* note 65, at 589-90; see also Andrew M. Riddles & Brenda Pomerance, *Software Patentee Must Conduct Own Search: Prior-Art Searches Made by the Patent Office Often Are Not Thorough Enough To Be Trusted*, NAT’L L.J., Jan. 26, 1998, at C19 (alleging that USPTO’s issuance of software patents is tantamount to a “mere registration process” because few patents have issued in this area and the examiner’s search does not include the most relevant non-patent prior art); Lehman, *supra* note 58, at 22 (“[E]ffective examination today requires comparing claimed inventions with information disclosed in countless journals and other publications to which PTO examiners have limited access and for which they lack effective search tools.”). Moreover, Bruce Lehman, a former USPTO Commissioner, has concluded that the tools and techniques for patent searching are more effective than those for non-patent literature. See *id.* at 23. Mr. Lehman concludes that the primary reasons for this discrepancy are the following: (1) the diverse nature of non-patent documents precludes the ability to search such documents “across the entire database;” and (2) non-patent literature can be searched only by “key words developed by a given examiner.” *Id.* Mr. Lehman further noted that even though U.S. examiners have access to databases of both the European and Japanese patent offices, examiners do not routinely consider prior art from other large patent offices, such as South Korea and China. *Id.* at 23.

69. Changes to Implement the Patent Business Goals, 65 Fed. Reg. 54,604, 54,633-35 (Sept. 8, 2000) (to be codified at 37 C.F.R. pts 1, 3, 5, & 10). See generally 37 C.F.R. § 1.105 (2002).

70. 37 C.F.R. § 1.105(a)(1) (2002); see also MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 704.11, at 700-07 (noting that the standard of “reasonable necessity” is generally met where: (1) the claimed subject matter cannot be adequately searched, or (2) either the application file or lack of relevant prior art found in the

that the examiner has at least a minimum threshold level of relevant prior art on which to base a patentability decision.⁷¹ The examiner's use of Rule 105, however, is not a substitute for a prior art search, which is performed by the examiner.⁷²

The promulgation of Rule 105 is just one of a number of efforts worldwide to reform the prior art search process.⁷³ While international patent offices attach great importance to the prior art search, patent offices are under unprecedented pressure to increase efficiency,⁷⁴ motivating several noteworthy changes to prior art searching.⁷⁵ The following section contrasts two recent developments regarding the prior

examiner's search justifies asking the applicant for more information germane to the patentability determination).

71. See 37 C.F.R. § 1.105(a)(1) (2002).

72. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 704.11, at 700-07.

73. See *infra* Part II.A; see also Harold C. Wegner, *Japanese E-Business and Internet Patents: A Comparative View in the Context of Patent Enforcement* 6 n.3 (presented at the 10th Annual Conference on International Intellectual Property Law & Policy, Fordham University Law School, Apr. 4-5, 2002) (concluding that because the Japanese Patent Office outsourced the prior art search, Japanese examiners have more time for judging patentability, thus "elevating the quality of their position"), available at http://www.foleylardner.com/FILES/tbl_s31Publications/Fileupload137/761/wegner_japaneseEbiz.pdf (last visited Apr. 15, 2003); JAPAN PATENT OFFICE (JPO), *Examination Guidelines for Patent and Utility Model in Japan, Part IX: Procedure of Examination*, § 4, Prior Art Search, at 3-5 (describing the JPO's establishment of the Industrial Property Cooperation Center (IPCC) as a search organization to assist the agency by conducting prior art searches on behalf of examiners), available at http://www.jpo.go.jp/tetuzuki_el/index.htm (last updated Mar. 8, 2002).

74. See PATENTS DIRECTORATE, THE PATENT OFFICE (GREAT BRITAIN), *Consultation on a Proposal to Contract Out Some Patent Searches and Examinations* (Mar. 21, 2002), at 3 (noting the strain on global patent offices is due to the insufficient number of examiners to examine the increasing numbers of applications), available at <http://www.patent.gov.uk/about/consultations/contract/contract.pdf> (last visited Oct. 21, 2002).

75. See, e.g., THE PATENT OFFICE (GREAT BRITAIN), *UK and Danish Patent Offices Increase Competitiveness Through Patent Search Deal* (describing the British Patent Office's contract to outsource patent searches for 750 patent applications to the Danish Patent & Trademark Office in order to "increas[e] the speed of its service to meet customer demand"), at <http://www.patent.gov.uk/about/press/releases/2003/200203.htm> (last updated Feb. 24, 2003); see also AIPLA/FICPI *Colloquium on Pendency Reduction*, Rome, Italy, Nov. 18-19, 2001, at 3 (quoting Dr. Ingo Kober, President, EPO, noting that the EPO's implemented measures to respond to its increase in workload include: (1) "rationalizing" its work under the Patent Cooperation Treaty to "place more emphasis on the examination carried out at the time of the search," and (2) bringing examination and search together), available at <http://www.aipla.org/html/ficpi/2001/ficpi1118.pdf> (last visited Apr. 20, 2003); *id.* at 4 (quoting Shinjiro Ono, Director-General of Appeals Dep't, Japan Patent Office (JPO), noting that the JPO's response to its increasing workload included outsourcing prior art searches to the Industrial Property Cooperation Center (IPCC), which maintains "close communications" with JPO examiners).

art search at the European Patent Office (EPO) and the USPTO. Interestingly, while both patent offices are faced with similar pressures, they have proposed diametrically opposite solutions.⁷⁶

II. RECENT U.S. AND EUROPEAN PRIOR ART SEARCH DEVELOPMENTS

A. *The EPO's BEST Initiative: A Unified Search and Examination Process*

The EPO is an international patent organization that utilizes a centralized procedure to enable an applicant to obtain patent protection in twenty European countries with a single patent grant.⁷⁷ Like the USPTO, the EPO employs an examination system that relies on a prior art search.⁷⁸ Unlike the USPTO, the EPO historically separated the search and substantive examination into two distinct prosecution stages.⁷⁹ A “search examiner” conducted the search, and a “substantive examiner” performed the examination.⁸⁰ Under this system, a search examiner studied the application, searched for the prior art documents, and provided a search report to a substantive examiner.⁸¹ A substantive examiner then studied the same application and the search report, resulting in a duplication of effort.⁸²

To eliminate this perceived inefficiency, the EPO launched an official project in 1993 for *Bringing Examination and Search Together* (BEST).⁸³ As its name suggests, BEST assigns both search and examination functions to a single examiner.⁸⁴ The benefits realized by the EPO include reducing the time required per application, eliminating conflicts between search and substantive examiners, and increasing the consistency between the search and substantive examiners regarding

76. Compare Part II.A *infra*, with Part II.B *infra*.

77. EUROPEAN PATENT OFFICE, *The European Patent Office*, at 7, available at <http://www.european-patent-office.org/epo/pubs/brochure/general/pdf/general.pdf> (last updated Oct. 18, 2001).

78. *Id.* at 9. See generally Wegner, *supra* note 65, at 222-23 (distinguishing EPO examiners from U.S. examiners by characterizing EPO examiners as “an elite diplomatic corps” with “great status” coupled with favorable salary and perquisites, greater experience, better language skills, higher specialization, and much lower work quotas).

79. EUROPEAN PATENT OFFICE, *Guidelines for Examination in the European Patent Office*, ch. II, Pt. B, at 2, available at http://www.european-patent-office.org/legal/gui_lines/pdf/a4berl.pdf (last visited Apr. 4, 2003).

80. Michel Marandon, *BEST and the Latest Trends in Automation in the EPO*, at <http://www2.ari.net/foley/marandon.html> (last visited Apr. 4, 2003).

81. See *id.*

82. See *id.*

83. *Id.*

84. *Id.*

cited documents.⁸⁵ Although BEST has not yet been fully implemented,⁸⁶ it has been highly successful to date⁸⁷ with full-scale implementation planned between 2004 and 2006.⁸⁸

B. The USPTO 21st Century Strategic Plan: Outsourcing the Prior Art Search to Commercial Vendors

In stark contrast to the EPO's BEST initiative, the USPTO has proposed not only to separate the search and examination functions, but also to contract out the search to a commercial vendor.⁸⁹ In a report accompanying the Patent and Trademark Authorization Act of 2002, the Judiciary Committee required the USPTO to "develop a [five]-year strategic plan to establish goals and methods by which the agency can enhance patent and trademark quality while reducing application pendency."⁹⁰ To this end, the committee directed the USPTO to "eliminate any task currently imposed on examiners that can be handled by administrative staff."⁹¹ Moreover, to increase efficiency, the committee ordered the USPTO to rely on "earlier search and examination results from the [EPO] performed under the Patent

85. *Id.* Despite these perceived drawbacks of the EPO system, at least one commentator feels that the EPO search is the best in the world. See Wegner, *supra* note 64, at 337.

86. See *AIPLA/FICPI Colloquium on Pendency Reduction*, *supra* note 75, at 3 (quoting Dr. Ingo Kober, President, EPO, predicting that, as of Nov. 2001, the BEST program "will be introduced office-wide within the [next] four or five years"), available at <http://www.aipla.org/html/ficpi/2001/ficpi1118.pdf> (last visited Apr. 20, 2003); see also Samson Helfgott, *International Intellectual Property Group News*, 18 INTELL. PROP. L. NEWSL. (ABA Section of Intellectual Prop. Law, Chicago, Ill.), Spring 2000, at 24.

87. See Bruce A. McDonald, *International Intellectual Property Rights*, 35 INT'L LAW. 465, 467 (2001) (noting that the BEST project "has been expanded with positive results"); see also John J. Gresens, *Colloquium on the Reduction of Patent Examination Pendency*, 20 INTELL. PROP. L. NEWSL. (ABA Section of Intellectual Prop. Law, Chicago, Ill.), Winter 2002, at 45 (noting the EPO's expansion of BEST as a solution to handle its backlog).

88. See *AIPLA/FICPI Colloquium on Pendency Reduction*, *supra* note 75, at 3; see also Irwin M. Krittman, *Recent Developments in the EPO*, INTELL. PROP. L. NEWSL. (ABA Section of Intell. Property Law, Chicago, Ill.), Spring 2000, at 27; Helfgott, *supra* note 86.

89. Under the revised *Strategic Plan*, the USPTO selects the contractor. See U.S. PATENT & TRADEMARK OFFICE, THE 21ST CENTURY STRATEGIC PLAN, at <http://www.uspto.gov/web/offices/com/strat21/index.htm> (last visited Apr. 19, 2003). However, the USPTO initially proposed in 2002 that the applicant would select the contractor. See *id.*; see also THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, pt. 3, P-01, at 8.

90. H.R. REP. NO. 107-190, at 2 (2001); see also S. 1754, 107th Cong. § 4 (2002) (enacted).

91. H.R. REP. NO. 107-190, at 6 (2001).

Cooperation Treaty.”⁹² The agency was also encouraged to use contract personnel more imaginatively to assist examiners in “administrative tasks.”⁹³

On June 3, 2002, the USPTO unveiled its *Strategic Plan*, which was later revised in February 2003.⁹⁴ The agency announced the “aggressive and far-reaching”⁹⁵ *Strategic Plan* as “a systematic attempt to incorporate the best-thinking of our applicants, our counterparts in Europe, Japan, and other countries, and our stakeholders.”⁹⁶ The *Strategic Plan* is detailed and comprehensive, proposing unprecedented changes to virtually the entire spectrum of USPTO operations to achieve three major goals: “agility,” “capability,” and “productivity.”⁹⁷ The *Strategic Plan*, however, introduces a particularly controversial change to the current examination system that will have significant implications for the patentability determination – the implementation of a “multi-track” examination process.⁹⁸

The *Strategic Plan* proposes to replace the current examination process with a “multi-track” system.⁹⁹ With limited exceptions,¹⁰⁰ the proposal precludes U.S. examiners from conducting prior art searches.¹⁰¹ Instead, the USPTO will rely solely on search results provided by private contractors or foreign intellectual property offices having bilateral

92. *Id.*

93. *Id.*

94. See generally THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5.

95. *Id.* at 1.

96. *Id.* at 2. See generally *House Hearing on USPTO Reform*, *supra* note 9, at 7 (statement of James E. Rogan, Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent & Trademark Office) (justifying the *Strategic Plan* by predicting that, if nothing is done by the USPTO, patent pendency rates could reach three to four years average from the current average of two years).

97. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 5.

98. See U.S. PATENT & TRADEMARK OFFICE (USPTO), THE 21ST CENTURY STRATEGIC PLAN, *Multi-Track Patent Examination Process*, at 1-2, at <http://www.uspto.gov/web/offices/com/strat21/action/p2p01.htm> (last modified Apr. 3, 2003).

99. *Id.*

100. The first track of the multi-track examination process provides that the U.S. examiner would conduct the prior art search as a near-term measure. *Id.* at 3. However, the USPTO expects that the number of applications searched by U.S. examiners will diminish as more searches are outsourced. *Id.* Another exception involves the examiner’s assessment of the quality of the contractor’s search. See U.S. PATENT & TRADEMARK OFFICE, THE 21ST CENTURY STRATEGIC PLAN, *Certification of Searching Authorities*, at 2, at http://www.uspto.gov/web/offices/com/strat21/action/q8p07_01.htm (last modified Apr. 3, 2003) (noting that if the examiner concludes the contractor’s search is inadequate after reviewing the submitted search report and cited prior art, “the examiner in his/her discretion might perform a supplemental search as appropriate”).

101. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 3.

agreements with the USPTO.¹⁰² By reducing the examiner's search burden in this manner, the USPTO predicts certain benefits.¹⁰³ These benefits include: a five to twenty percent examiner productivity increase because examiners will "better" spend their time on patentability analysis;¹⁰⁴ cost savings via reduced search time and effort; and elimination of the need for an extensive search system infrastructure supporting high-volume searching.¹⁰⁵

Under the revised *Strategic Plan*, the USPTO will conduct the prior art search by first selecting a commercial vendor (known as a "Certified Search Service" (CSS)) that submits a certified search report upon which the examiner will rely.¹⁰⁶ However, if a search is deemed inadequate, the examiner will: (1) perform a "supplemental search" subject to supervisory approval, or (2) require the contractor to "correct" the search and search report.¹⁰⁷ In contrast, the original *Strategic Plan* provided that if the examiner determined the search was inadequate, he or she would notify the applicant and seek supplemental information under Rule 105.¹⁰⁸ Although it is unclear why Rule 105 was not mentioned in the revised *Strategic Plan* in connection with the examiner's remedies to correct an inadequate CSS search, presumably Rule 105 will remain available to examiners.¹⁰⁹

102. See THE 21ST CENTURY STRATEGIC PLAN, *Multi-Track Patent Examination Process*, *supra* note 98, at 3-7.

103. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 9.

104. *Id.* at 9; see also *Legislative Hearing on H.R. 1561, "United States Patent and Trademark Fee Modernization Act of 2003," Before the Subcomm. on Courts, the Internet, and Intellectual Property of the House Comm. on the Judiciary, 107th Cong. (2003)* (statement of James E. Rogan, Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent & Trademark Office) ("By outsourcing the search function, we can ensure that the patent examiners of tomorrow will be like the quality review examiners of yesterday in that they will begin with a more complete search and set of information as their starting point."); Wegner, *supra* note 73, at 6 n.3 (concluding that because the Japanese Patent Office outsourced the prior art search, Japanese examiners have more time for judging patentability, thus "elevating the quality of their position").

105. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 3.

106. See *id.* at 8.

107. See THE 21ST CENTURY STRATEGIC PLAN, *Certification of Searching Authorities*, *supra* note 100, at 2.

108. See THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 11; see also *Frequently Asked Questions*, *supra* note 7, at Q-12, Q-20 (noting that examiners may use Rule 105 to request specific technical information from applicants via a CSS). See generally *supra* notes 69-72 and accompanying discussion of Rule 105.

109. See *supra* note 108. See generally *supra* notes 69-72 and accompanying discussion of Rule 105.

A CSS must be certified by the USPTO,¹¹⁰ and following initial certification, the CSS must periodically be re-certified.¹¹¹ Under the original *Strategic Plan*, an applicant using a CSS would still have been subject to the duty of candor and good faith under Rule 56.¹¹² Presumably, comparable standards would apply to a USPTO-selected CSS under the revised *Strategic Plan*.¹¹³ Thus, under commensurate standards, a CSS will be considered to have acted in good faith provided there is no intent to mislead the USPTO, the search incorporates a reasonable set of search criteria, and it reasonably encompasses the scope of the prior art.¹¹⁴

III. IS IT APPROPRIATE TO OUTSOURCE THE PRIOR ART SEARCH?

Despite the laudable goals cited in the *Strategic Plan*, outsourcing the search is inappropriate in view of substantial legal and practical problems.¹¹⁵ The prior art search is a discretionary decision-making

110. THE 21ST CENTURY STRATEGIC PLAN, *Certification of Searching Authorities*, *supra* note 100, at 2. The original *Strategic Plan* envisioned a certification process to employ a process similar to the ISO 9000 certification technique. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 11. However, the revised *Strategic Plan* states that the USPTO will use “a process similar to the ISO 9001 certification technique and/or similar contract provisions.” THE 21ST CENTURY STRATEGIC PLAN, *Certification of Searching Authorities*, *supra* note 100, at 2. Although it is unclear why the USPTO shifted from ISO 9000 to ISO 9001 standards, the USPTO has explained what certification criteria will be employed:

The certification criteria would be similar to those utilized to designate an International Search Authority (ISA) under PCT, such as number and type of technical staff; the nature and extent of training provided; the manner of claim interpretation; . . . competency to perform high quality searches, technical knowledge and organizational infrastructure such as in-house databases or search engines and access to external prior art databases (commercial data bases).

Id.; see also *Frequently Asked Questions*, *supra* note 7, at Q-11 (noting that the USPTO plans to discuss further enhancements to the search guidelines to include trilateral search databases and non-patent literature). See generally International Organization for Standardization, *ISO 9000 for Busy Managers*, in THE BASICS: THE MAGICAL AND DEMYSTIFYING TOUR OF ISO 9000 AND ISO 14000, (explaining ISO 9000 as a “family of standards represent[ing] an international consensus on good management practices” to ensure an organization can consistently deliver products or services meeting the client’s quality requirements), at <http://www.iso.ch/iso/en/iso9000-14000/tour/plain.html> (last visited Jan. 31, 2003).

111. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 11; see also THE 21ST CENTURY STRATEGIC PLAN, *Certification of Searching Authorities*, *supra* note 100, at 2.

112. THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 8-9.

113. See THE 21ST CENTURY STRATEGIC PLAN, *Certification of Searching Authorities*, *supra* note 100, at 1-3.

114. See THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 8-9.

115. See *infra* Parts III.A-E. But cf. Tamara Loomis, *Opposition to Reform Has Scaled Back Overhaul of PTO*, N.Y.L.J., Feb. 13, 2003, at 5 (noting that the general feeling

process inextricably intertwined with examination so as to preclude its outsourcing.¹¹⁶ The prior art search is therefore inherently governmental and is most appropriately performed by government examiners.¹¹⁷ Moreover, practical problems resulting from outsourcing could actually diminish the efficiency benefits sought to be achieved by the *Strategic Plan*.¹¹⁸

A. The Prior Art Search Function Is Necessarily Decision-Making Activity Tantamount to an "Inherently Governmental Function"

As noted by the U.S. Supreme Court, a U.S. patent serves a paramount public interest by granting exclusive constitutional privileges to its owner.¹¹⁹ The "far-reaching social and economic consequences" of this grant necessitate that the patentability determination be free from fraud or inequitable conduct.¹²⁰ Accordingly, in exercising patentability determinations, patent examiners act in a quasi-judicial capacity,¹²¹ and their decisions have significant social and economic impact.¹²² Therefore, the examiner's quasi-judicial role is a discretionary function¹²³ that

among patent attorneys regarding outsourcing searches is that "the devil will be in the details" and "whether it's a good or bad thing will depend on how it's implemented").

116. See discussion *infra* Parts III.A, D.

117. See discussion *infra* Part III.A.

118. See discussion *infra* Part III.E.

119. See *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945); see also 37 C.F.R. § 1.56(a) (2002).

120. *Precision Instrument*, 324 U.S. at 816. See generally Lehman, *supra* note 58, at 21 ("A patent is a very strong right, and owning a patent can have an extremely significant economic impact.").

121. *W. Elec. Co. v. Piezo Tech., Inc.*, 860 F.2d 428, 431 (Fed. Cir. 1988). In fact, prior to 1960, primary examiners had to have a law degree. Weissman, *supra* note 60, at 621.

122. *Lindsey v. United States*, 778 F.2d 1143, 1146 (5th Cir. 1985) (noting the examiner's patentability determination necessarily involves decision-making "weighing considerations of social, economic, and political policy"); see also Lehman, *supra* note 58, at 21 ("A patent is a very strong right, and owning a patent can have an extremely significant economic impact."); S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 26 (noting that because there is no general advocate for the public interest, "[t]he examiner must act as a court of original jurisdiction and at the same time protect the public interest against the grant of invalid patents as well as patents of unduly broad scope"); Al Lawrence Smith, *Negotiating With Patent Examiners*, 72 J. PAT. & TRADEMARK OFF. SOC'Y 168, 169 (1990) ("[The examiner's] client is the public at large.").

123. See *Lindsey*, 778 F.2d at 1146 (holding a patent examiner immune from tort liability under the discretionary function exception to the Federal Tort Claims Act, 28 U.S.C. § 2680, because the examiner's patentability determination necessarily involves decision-making that weighs "considerations of social, economic, and political policy"); see also *Chamberlin v. Iesen*, 779 F.2d 522, 525-26 (9th Cir. 1985) (holding that a patent examiner met the discretionary function exception to the Federal Tort Claims Act because the examiner's decision regarding clarity and definiteness of the application under 35 U.S.C. § 112 implicates the social and economic concerns underlying the patent system);

clarifies and strengthens intellectual property rights, ultimately for the public good.¹²⁴

The prior art search is a discretionary component of the quasi-judicial examination process.¹²⁵ As noted by the Judiciary Committee in 1961, the examiner must exercise judgment to determine the extent of the prior art.¹²⁶ Moreover, the examiner's competence and judgment essentially determine the quality of the prior art search.¹²⁷ Absent a quality search, the examiner will not have the necessary information on which to base a sound patentability determination.¹²⁸ Therefore, the prior art search results essentially dictate the outcome of the quasi-judicial patentability decision.¹²⁹ In view of the far-reaching social and economic consequences of the examiner's decision,¹³⁰ the quasi-judicial officials making such decisions are best suited to obtain the prior art upon which to base their

Cockburn, *supra* note 26, at 24 (concluding that “[e]xaminers necessarily exercise discretion”).

124. See King, *supra* note 25, at 23 (“Patent examination contributes to the clarity and strength of intellectual property rights, and therefore plays an important role in the patent system as a whole.”); see also Lehman, *supra* note 58, at 21 (“The quality and trustworthiness of the examination system is at the core of investor confidence in many high-tech companies.”). But see Cockburn, *supra* note 26, at 9 (noting the inconsistency among examiners in granting patents and concluding that “there may be as many patent offices as there are patent examiners”); John R. Thomas, *The Responsibility of the Rulemaker: Comparative Approaches to Patent Administration Reform*, 17 BERKELEY TECH. L.J. 727, 759 (2002) (“The USPTO is Balkanized into technology-based subdivisions that sometimes act under different search and examination policies than other divisions.”).

125. See Welsh, *supra* note 9, at 75 (concluding that the patentability opinion is “only as good as the search results it is based upon”); see also House Hearing on USPTO Reform, *supra* note 9, at 91 (statement of Ronald J. Stern, President, Patent Office Professional Association) (“The patentability determination can only be as good as the prior art on which that patentability determination is founded.”).

126. S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 14 (noting that such “judgment can only come with experience”).

127. *Id.* at 16.

128. USPTO Public Hearing on Prior Art, *supra* note 2, at 28,804. In fact, one article noted that the strength of a U.S. patent in litigation is directly proportional to the amount of prior art the USPTO considers. See John R. Allison & Mark A. Lemley, *The Growing Complexity of the United States Patent System*, 82 B.U. L. REV. 77, 101 (2002).

129. See discussion *supra* note 121.

130. See *Lindsey v. United States*, 778 F.2d 1143, 1146 (5th Cir. 1985) (noting that the examiner's patentability determination necessarily involves decision-making that weighs “considerations of social, economic, and political policy”); see also S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 26 (noting that because there is no general advocate for the public interest, “[t]he examiner must act as a court of original jurisdiction and at the same time protect the public interest against the grant of invalid patents as well as patents of unduly broad scope”); Smith, *supra* note 122, at 169 (“[The examiner's] client is the public at large.”).

decisions.¹³¹ One might argue that an approved CSS would match or exceed the examiner's technical competence and thus, theoretically, be able to perform an equally valid search.¹³² But, even if a private vendor's search report appears to present quality results, it is still very difficult to determine whether it can be trusted for a sound patentability determination.¹³³ Moreover, even if one assumes the private vendor's expertise and examiner's expertise are equivalent,¹³⁴ one fundamental difference distinguishes the examiner from the private vendor: the patent examiner, unlike the commercial searcher, works solely for the public interest with no ulterior economic motive.

Outsourcing other government activities involving decision-making responsibility has resulted in serious government accountability problems.¹³⁵ While there has been a recent trend towards privatization of

131. Even judges perform their own searches to support their legal conclusions. *See, e.g., In re Mines Tire Co.*, 194 B.R. 23, 24-25 (Bankr. W.D.N.Y. 1996). In a dispute involving whether a publicly available and searchable financing statement was seriously misleading, the court in *In re Mines Tire Co.* was not satisfied with either party's search of the financial records. *See id.* Consequently, the court performed its own search to settle the matter. *See id.* *But cf. Drew Clark, Lawyers Amenable to Compromise on Patent Searches*, NAT. J. TECH. DAILY (P.M. ED.), Apr. 15, 2003, at 2 (quoting Chris Katopis, Deputy Administrator for USPTO External Affairs, who compared separating examination and searching to the division of labor in a court—the jury is charged with finding facts, while the judge applies the law).

132. *See THE 21ST CENTURY STRATEGIC PLAN*, *supra* note 5, at 3. *But see* Brian M. Berliner, *Predicting the Future by Studying the Past: Giving an Opinion on the Patentability of an Invention*, G-715 PRACTICING LAW INSTITUTE, PREPARING PATENT LEGAL OPINIONS 2002, at 411, 416 (2002) (noting that private searchers usually lack the attorney's level of understanding of the invention and may not appreciate its important subtleties); Grantham, *supra* note 56, at 8 (distinguishing the public sector searcher (i.e., examiner) from the private sector searcher by reasoning that the private sector searcher is merely a generalist who "looks for broad teachings based on a limited disclosure," whereas an examiner is recognized as an expert who has acquired a "feel for patentability based on awareness of the historical aspect of specific art").

133. Welsh, *supra* note 9, at 87.

134. While it is difficult to assess whether the private vendor's expertise matches or exceeds that of the examiner, anecdotal evidence suggests that private searchers often rely on the examiner's expertise to ensure a complete search. *See, e.g.,* Berliner, *supra* note 132, at 416 ("The searching agent may also consult with an [e]xaminer for the relevant art unit in order to confirm that he has searched the most relevant classes and subclasses."); *see also* Welsh, *supra* note 9, at 84 (noting that private searchers often consult with examiners to identify the appropriate search areas); James F. Cottone, *Online Patent Searching: A Good News Story, But Not the Whole Story*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 233, 235 (1997) ("Not infrequently, an [e]xaminer may advise the searcher to 'be on the lookout for the Jones patent' or be sure to check the last few years (or the foreign art) in a particular class or subclass . . . or may offer other guidance that leads directly to [relevant prior art].").

135. *See* Heidi Gorovitz Robertson, *Legislative Innovation in State Brownfields Redevelopment Programs*, 16 J. ENVTL. L. & LITIG. 1, 67 (2001) (noting the potential problems with the privatization of prisons); *see also* Jack M. Beermann, *Privatization and*

certain traditional government activities, such as administering prisons¹³⁶ and schools,¹³⁷ courts have been cognizant of the conflict between the contractor's primary interest – the profit motive – and the public interest, including the protection of constitutional rights.¹³⁸ Indeed, in the context of privatized prisons, the Sixth Circuit noted that the profit motive provides a greater incentive for contractors to cut costs in ways that infringe the constitutional rights of prisoners.¹³⁹ The U.S. Supreme Court affirmed the Sixth Circuit but was noticeably silent regarding the Sixth Circuit's view on the constitutional implications of the conflict of interest.¹⁴⁰ While the Supreme Court's silence may be interpreted as tacit approval, Justice Scalia's dissent noted that the majority's silence was due to its disagreement with such an "implausible" theory.¹⁴¹

As emphasized by the Sixth Circuit, the specter of contractor cost-cutting in order to maximize profits is a very real danger in privatized activities.¹⁴² This danger would be particularly acute in a patent examination context. Indeed, a favorable patentability decision resulting from a private vendor's omission of the best prior art could confer significant economic advantage to the patentee.¹⁴³

If a patent examiner conducted the search, however, his or her search judgment would be immune from pressures unique to the private sector, such as the maximization of profits, market share, and competitive advantage.¹⁴⁴ This distinction is fundamental because the prior art search

Political Accountability, 28 FORDHAM URB. L.J. 1507, 1525 (2001) (noting that contracting out activities involving discretion and government power over individuals can raise serious issues of government accountability).

136. See generally *Richardson v. McKnight*, 521 U.S. 399, 405 (1997).

137. See generally *Beermann*, *supra* note 135, at 1525 (discussing privately operated schools).

138. See, e.g., *McKnight v. Rees*, 88 F.3d 417, 424 (6th Cir. 1996) *aff'd sub nom*, *Richardson v. McKnight*, 521 U.S. 399 (1997).

139. *Id.* at 424 n.4.

140. See *Richardson*, 521 U.S. at 414.

141. See *id.* at 421 (Scalia, J., dissenting).

142. See *McKnight*, 88 F.3d at 424 n.4.

143. See e.g., *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945) (emphasizing the significant economic consequences of a patent grant).

144. See Robert M. Sherwood et al., *Promotion of Inventiveness in Developing Countries Through a More Advanced Patent Administration*, 39 IDEA 473, 480 (1999) (concluding that full-time patent examiners are more credible than fixed-fee contractors because contractors "may limit the time they devote to examinations, thus limiting the extent of their searches"). See generally U.S. DEPARTMENT OF COMMERCE, OFFICE OF GENERAL COUNSEL, ETHICS DIVISION, *Summary of Ethics Rules, U.S. Patent and Trademark Office* (2000), at 1, 2 (noting that employees of the USPTO are "placed in a position of trust and are held to a high standard of ethical conduct and may not participate in any matter implicating a financial conflict of interest"), available at <http://www.uspto.gov/web/offices/com/advisory/acrobat/pto2000e.pdf> (last visited Apr. 20, 2003);

essentially dictates the outcome of the patentability determination.¹⁴⁵ While an examiner might determine that a comprehensive search requires extending the search to additional areas, including foreign art, a private vendor may be motivated to compromise the search by performing a minimal,¹⁴⁶ misleading,¹⁴⁷ or substandard¹⁴⁸ search, or by prematurely terminating it in order to maximize profits.¹⁴⁹ Given the

GALVESTON COUNTY SMALL BUS. DEV. CENTER, *Know Your Competition and Increase Your Competitive Advantage*, at 1-3 (advising private sector businesses how to evaluate their competition and increase their competitive advantage), available at <http://www.gc.edu/sbdc/articles/1998e/article5.htm> (last modified July 9, 2002). The examiner's immunity from private-sector pressures has likely contributed to the perceived high quality of U.S. examiners' prior art searches. Indeed, the IP Law Section of the ABA has concluded that "U.S. examiners generally can perform the best, highest quality searches in the world." *House Hearing on USPTO Reform*, *supra* note 9, at 49 (2002) (statement of Charles P. Baker, Chair, Section of Intellectual Property Law, American Bar Association). *But see PTO Draft Fee Bill and Strategic Plan Draw Cool Response at House Hearing*, 64 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1582, July 26, 2002, at 296-97 (quoting USPTO Director James Rogan's statement that "there may be many former PTO examiners who would love to get a private salary to do patent searches").

145. See *House Hearing on USPTO Reform*, *supra* note 9, at 91 (statement of Ronald J. Stern, President, Patent Office Professional Association) ("The patentability determination can only be as good as the prior art on which that patentability determination is founded.").

146. See Sherwood et al., *supra* note 144, at 480 (concluding that full-time patent examiners are more credible than fixed-fee contractors because contractors "may limit the time they devote to examinations, thus limiting the extent of their searches").

147. *Caveat Inventor: Invention Marketing Scams: Hearing Before the Subcomm. on Regulation and Government Information of the Senate Comm. on Government Affairs*, 103d Cong. 16, 44 (1994) [hereinafter *Senate Hearing on Invention Promotion Companies*] (statement of Robert G. Lougher, President, Inventors Awareness Group) (presenting a striking example of a private firm's exploiting misleading search results). Mr. Loucher testified that he witnessed the firm maintain two separate patent searches for each inventor, one search suggesting the invention was patentable, while the other suggested it was unpatentable. *Id.* at 44. The firm would then choose the search that best fit its needs. *Id.*; see also FTC, *Consumer Alert: Spotting Sweet-Sounding Promises of Fraudulent Invention Promotion Firms*, July 1997 (warning consumers that "[p]atent searches by fraudulent invention promotion firms usually are incomplete, conducted in the wrong category, or unaccompanied by a legal opinion on the results of the search from a patent attorney"), available at <http://www.ftc.gov/bcp/online/pubs/alerts/invnalrt.htm> (last visited Apr. 4, 2003).

148. Berliner, *supra* note 132, at 416 (admonishing patent practitioners to be wary of a private vendor's prior art search because the search results may be substandard and produce results that give their clients the false impression that the invention is patentable).

149. See Sherwood et al., *supra* note 144, at 480 (concluding that full-time patent examiners are more credible than fixed-fee contractors because contractors "may limit the time they devote to examinations, thus limiting the extent of their searches"). Moreover, patentability searches cost about \$1,100, even for search results of questionable value. See Curtis L. Harrington, *Inventive Ideas About Patent Searches*, MACHINE DESIGN, Dec. 11, 1997, at 110. However, more comprehensive searches, such as infringement and validity searches, are more expensive. *Id.* For example, infringement searches cost between

exclusive constitutional rights at stake,¹⁵⁰ any negative impact on the prior art search could infringe the constitutional rights of the patent owner as well as others excluded from making, using, or selling the invention.¹⁵¹

The Office of Management and Budget (OMB) defines an inherently governmental function as “a function which is so intimately related to the public interest as to mandate performance by [g]overnment employees.”¹⁵² Inherently governmental functions include activities requiring the exercise of discretion or value judgment in making decisions for the Government.¹⁵³ In view of the quasi-judicial nature of patent examination and the decision-making process inherent to the prior art search that directly affects the public interest, patent searching likely qualifies as an inherently governmental function.¹⁵⁴ Thus, outsourcing the examiner’s search to the private sector appears to be contrary to OMB guidelines and therefore inappropriate.¹⁵⁵

\$2,000 and \$10,000. *Id.* Also, the extent and quality of a validity search are dependent upon an analysis of the expected benefits of the search with its cost. *Id.* In deciding whether to terminate validity searches, clients continually compare the cost of each step of the search with the amount of royalty payment they expect to receive. *Id.* Interestingly, some foreign patent offices, such as Ecuador’s patent office, hire local university professors to assist in patent examination. See Robert M. Sherwood, *The TRIPS Agreement: Implications for Developing Countries*, 37 IDEA 491, 528 (1997). However, “[t]he quality of the examination will depend on the knowledge, interest and skill of the professor, who may be happy to earn extra income, but who may not be well versed in technical examination of patent applications.” *Id.*

150. See U.S. CONST. art. I, § 8, cl. 8; 35 U.S.C. §§ 154(a), 271(a) (2000); Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945).

151. See U.S. CONST. art. I, § 8, cl. 8. The Constitution gives Congress the authority to “secur[e] for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries.” *Id.* Accordingly, once the patent is granted, the patentee can exclude others from making, using, or selling the invention for twenty years from the filing date of the patent application. See 35 U.S.C. §§ 154(a), 271(a) (2000); see also Lehman, *supra* note 58, at 21 (“[T]he patent right goes far beyond the right to prevent another from simply copying [It also] conveys the right to exclude all others from making, selling, and using the invention for [twenty] years from filing . . .”).

152. Office of Management & Budget, Circular No. A-76, at 2, Aug. 4, 1983 (Rev. 1999); see also Federal Activities Inventory Reform Act of 1998, Pub. L. No. 105-270, § 5, 112 Stat. 2382, 2384 (codified as amended at 31 U.S.C. § 501 note (2000)). See generally Nat’l Treasury Employees Union, 42 F.L.R.A. No. 31 (1991), at 19-25 (holding that the OMB Circular A-76 has the force and effect of law because it is a substantive regulation issued pursuant to statutory authority affecting individual rights and obligations), available at 1991 WL 207425.

153. Office of Management & Budget, Circular No. A-76, at 2, Aug. 4, 1983 (Rev. 1999).

154. See *id.*

155. See *id.*

Conversely, the USPTO has argued that while outsourcing the search is not an optimal solution,¹⁵⁶ it is nevertheless needed to shift between twenty and twenty-five percent of the examiner's time toward improving patent quality and reducing application pendency.¹⁵⁷ Moreover, an examiner could perform "a supplemental search" if the examiner determines a CSS's search has "any kind of faulty strategy behind [it]."¹⁵⁸ A deficient search, however, may not be apparent from a mere inspection of the search strategy.¹⁵⁹ Indeed, it would be extremely difficult, if not impossible, to determine whether a private vendor prematurely terminated a search or whether the search was otherwise misleading for some inequitable motive.¹⁶⁰ Even if an examiner conducted a "supplemental search," it likely would not match the scope and breadth of a comprehensive patentability search in view of the examiner's time constraints.¹⁶¹ Additionally, even if the expected five to twenty percent productivity increase were realized by shifting the examiner's efforts away from searching,¹⁶² it is questionable whether such a modest productivity gain is worth the risk of potentially undermining the presumption of patent validity by granting patents based on substandard searches performed by contractors whose primary motivation is to make money, rather than serve the public interest.

156. See *House Hearing on USPTO Reform*, *supra* note 9, at 76 ("In a perfect world, our examiners would also do the searches.").

157. See *id.*

158. See *id.* at 77.

159. See *Frequently Asked Questions*, *supra* note 7, at Q-6. According to the USPTO, the CSS will prepare both a "search abstract" and an international-style search report that will compare the prior art to the claims. *Id.* The USPTO concludes that the search report will save prosecution time by leading to a "quicker meeting of the minds" resulting from the examiner benefiting from the CSS's prior art analysis and having "a better appreciation" of claim coverage. *Id.*

160. See *Senate Hearing on Invention Promotion Companies*, *supra* note 147, at 44 (statement of Robert G. Lougher, President, Inventors Awareness Group) (recalling witnessing an unscrupulous private invention promotion firm having two different patent searches from which it would choose to best suit its interests—one suggesting the idea was patentable and the other suggesting it was unpatentable); see also Sherwood et al., *supra* note 144, at 480 (stating that full-time patent examiners are more credible than fixed-fee contractors because contractors "may limit the time they devote to examinations, thus limiting the extent of their searches"); Grantham, *supra* note 56, at 9 ("It is unclear how the PTO would recognize a low quality prior art search if it lacks knowledge of the accumulated history of the art."). See generally *id.* at 8 ("Ambiguity . . . is the hallmark of prior art searching.").

161. See *supra* notes 60-68 and accompanying text. See generally Thomas, *supra* note 60, at 314 (discussing the time constraints imposed on patent examiners by the USPTO).

162. See *House Hearing on USPTO Reform*, *supra* note 9, at 76; see also THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 9.

B. Legislative Intent Strongly Suggests That Examiners Should Conduct the Searches

1. The Patent Act of 1836 Established the Examiner's Duty To "Discover" Previous Inventions

The Patent Act of 1836 established the current examination system and emphasized that examination was intended to discover previous inventions.¹⁶³ Moreover, the Act provided a method to collect the prior art to facilitate examination.¹⁶⁴ To this end, Congress appropriated funds specifically targeted to add "to the knowledge of the office" and acquire enhanced prior art research facilities.¹⁶⁵ In an 1837 report, Senator Ruggles emphasized that the examiner must thoroughly investigate "all that has been known or invented" pertaining to the subject matter of the invention.¹⁶⁶ Thus, Congress likely intended that examiners conduct the searches in view of the narrowly targeted appropriation for patent research, the express statements that the examiner's duties include searching, and the 165-year tradition of examiners conducting the searches since passage of the 1836 Act.¹⁶⁷

163. *Outline of the History of the United States Patent Office*, *supra* note 44, at 99.

164. *Id.* at 97.

165. *Id.* at 99.

166. *See id.* at 216 (quoting Senator Ruggles in an 1837 report made less than one year after passage of the Patent Act of 1836).

167. *See generally supra* text accompanying notes 38-39. Such apparent congressional intent suggests that the statutory term "examination" in 35 U.S.C. § 131 inherently comprises the examiner conducting the prior art search. *See generally supra* text accompanying notes 38-39. It is well settled that if congressional intent underlying the statute in question is clear, then both the agency and the courts must defer to Congress' position. *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984). However, if Congress is silent or ambiguous, then the court must defer to the agency's reasonable interpretation. *Id.* A court may not substitute its own construction for the agency's reasonable interpretation, even if the court would have reached a different conclusion. *Id.* at 844. Thus, under *Chevron*, if Congress intended for the statutory term "examination" to include both the patentability determination and the prior art search, both the courts and the agency would have to defer to the position consistent with Congress' intent. *See id.* However, even if Congress was completely silent or ambiguous regarding its underlying intent, courts could hold that any change in the USPTO's interpretation of "examination" (*i.e.*, from examiners conducting the search for over 165 years to examiners not performing the search) would be unreasonable under *Chevron*. *See id.* While "[a]n initial agency interpretation is not carved in stone," the agency must nevertheless justify its change with a "reasoned analysis." *Id.* at 863-64; *see also Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 57 (1983). Moreover, the determination of whether an agency's interpretation is reasonable turns on the compatibility of the inquiry with the underlying congressional purposes informing the measure. *Con'l Air Lines, Inc. v. Dep't of Transp.*, 843 F.2d 1444, 1449 (D.C. Cir. 1988). Here, the agency's reasoned analysis for changing its interpretation of "examination" presumably is set forth in the *Strategic Plan*, namely the expected benefits to quality,

2. *Legislative Intent Underlying the Patent & Trademark Authorization Act of 2002 Does Not Reasonably Suggest Outsourcing the Prior Art Search to Private Vendors*

In the report accompanying H.R. 2047, the Judiciary Committee directed the USPTO to eliminate any examiner's tasks that can be handled by "administrative staff."¹⁶⁸ Additionally, the committee suggested that the agency rely on earlier search and examination results solely from the EPO for efficiency reasons.¹⁶⁹ The USPTO was also instructed to consider using contractors to assist examiners in performing "administrative tasks."¹⁷⁰ The Committee, however, did not define the ambiguous phrase, "administrative tasks."¹⁷¹

Nevertheless, it is reasonable to assume Congress' intent would be consistent with the OMB mandate requiring that governmental functions be performed by government employees.¹⁷² OMB has listed numerous examples of commercial activities suitable for outsourcing.¹⁷³ The listed tasks, however, are merely ministerial and are not reasonably analogous

pendency, and cost-effectiveness. See THE 21ST CENTURY STRATEGIC PLAN, *supra* note 5, at 3. Despite these laudable goals, it is unclear whether courts would view this justification as a sufficiently reasoned analysis to pass muster under *State Farm* and *Chevron*. See *Chevron*, 467 U.S. at 863; *State Farm*, 463 U.S. at 57. Courts might view the potential detrimental impact on the presumption of validity, certainty, and the public perception of the patent system as far outweighing the expected quality, pendency, and cost-effectiveness benefits, if any, realized by the agency. Moreover, the underlying congressional purpose informing the measure is the establishment of an examination system that grants presumptively valid patents whose validity ultimately depends on thorough prior art searches. See *supra* Part I.A. As noted in Part III.B.2 *infra*, Congress narrowly limited its directive to the USPTO to explore taking advantage of search results only from the EPO. See H.R. REP. NO. 107-190, at 6 (2001). Indeed, Congress was noticeably silent about using searches from the private sector. Therefore, if legally challenged, outsourcing prior art searches to private vendors may not be viewed as reasonably consistent with Congress' purpose and therefore could be held unreasonable under *Chevron*.

168. H.R. REP. NO. 107-190, at 6.

169. See *id.*

170. *Id.*

171. See *id.*

172. See Office of Management and Budget Circular No. A-76, at 2, Aug. 4, 1983 (Rev. 1999); see also *Courtney v. Smith*, 297 F.3d 455, 462 (6th Cir. 2002) (noting that OMB Circular A-76 is relevant to determine congressional intent underlying statutes); *Nat'l Fed'n of Fed. Employees v. Cheney*, 883 F.2d 1038, 1049 (D.C. Cir. 1989) (quoting congressional endorsement of OMB Circular A-76 in a Senate report to retain "inherently governmental" functions in-house); *Diebold v. United States*, 947 F.2d 787, 801 (6th Cir. 1991) (noting the congressional mandate that the Defense Department follow OMB Circular A-76 in its outsourcing process).

173. Office of Management & Budget, Circular No. A-76, at Attachment A, Aug. 4, 1983 (Rev. 1999).

to a prior art search upon which a quasi-judicial patentability decision is based.¹⁷⁴

Furthermore, while Congress mentioned relying on earlier search and examination results from the EPO, Congress refrained from suggesting similar reliance on searches from commercial vendors.¹⁷⁵ Thus, by negative implication, Congress expressed disapproval of such outsourcing.¹⁷⁶ Instead, Congress merely advised the USPTO to consider outsourcing “administrative tasks” to contract personnel.¹⁷⁷ In view of Congress’ narrow directive, the USPTO’s apparent interpretation of “administrative tasks” to include prior art searching arguably oversteps the scope of the mandate.¹⁷⁸

174. *Id.* The categories of tasks listed in the circular that are most relevant are: (1) “Office and Administrative Services,” (2) “Special Studies and Analyses,” and (3) “Other Services.” *Id.* The tasks listed in the first category are limited to ministerial and clerical functions. *Id.* Under the second category, the closest tasks are “scientific data studies” and “legal/litigation studies.” *Id.* Even with the broadest reasonable interpretation of such studies, it is unlikely that a prior art search upon which patentability depends would be envisioned by a “legal/litigation” or “scientific data” study. Litigation studies and scientific data studies are predominantly statistical in nature and, unlike patent examination, do not require quasi-judicial analysis and opinions affecting the public interest. *See generally supra* notes 110-111 and accompanying text. The final category, “Other Services,” does not contemplate an activity reasonably related to a prior art search. Office of Management & Budget, Circular No. A-76, at Attachment A, Aug. 4, 1983 (Rev. 1999). Therefore, interpreting “administrative tasks” in light of the circular strongly suggests that Congress did not intend to have the agency outsource the prior art search to commercial vendors. Also, the statutory exceptions to “inherently [g]overnmental functions” provided in the Federal Activities Inventory Reform Act of 1998 do not reasonably apply to a prior art search upon which a patentability determination depends. *See* Federal Activities Inventory Reform Act of 1998, Pub. L. No. 105-270 § 5(2)(C), 112 Stat. 2382, 2385 (codified as amended at 31 U.S.C. § 501 note (2000)). The closest exception is for “gathering information for or providing advice, opinions, recommendations, or ideas to [f]ederal [g]overnment officials.” *Id.* However, “gathering information” would not reasonably contemplate a prior art search for a quasi-judicial patentability determination in view of the decision-making function inherent to the search. Moreover, as will be explained in Part III.D *infra*, the search and the examination functions are inextricably intertwined and cannot be reasonably separated.

175. *See* H.R. REP. NO. 107-190, at 6 (2001).

176. *See id.* In fact, Rep. John Conyers of the Subcommittee on Courts, the Internet, and Intellectual Property of the House Judiciary Committee expressed concern with the USPTO’s outsourcing proposal. *See House Hearing on USPTO Reform, supra* note 9, at 84 (statement of Rep. John Conyers, Jr., Mich.). Rep. Conyers concluded that “conducting thorough searches is an integral part of the PTO’s examination role.” *Id.* Moreover, he expressed uncertainty regarding “how [Congress and the USPTO] would ensure that every search on every application was thoroughly done by the contractors.” *Id.*

177. H.R. REP. NO. 107-190, at 6 (2001).

178. This conclusion holds despite previous efforts on the part of various government agencies to outsource legal services, including patent searching. For example, the Department of the Air Force, the Department of the Army, the Department of Health &

Nevertheless, proponents of outsourcing searches have argued that it is a viable option for several reasons.¹⁷⁹ First, because applicants frequently use private search firms to assess the prior art before filing patent applications, outsourcing the search merely institutionalizes that practice.¹⁸⁰ Because the quality and extent of private searches vary widely among vendors, however, some commercial “state-of-the-art” searches are of questionable value.¹⁸¹ Secondly, outsourcing proponents note that the EPO had at one time employed a split search and examination process.¹⁸² However, the EPO has recognized the problems inherent in such a system and is currently abandoning this approach through implementation of BEST.¹⁸³ Proponents of outsourcing searches further argue that U.S. patents are sometimes later invalidated due to prior art found by private search firms.¹⁸⁴ Such “validity searches” are extremely exhaustive investigations conducted primarily for litigation purposes, span several weeks, and consider every possible relevant publication – no matter how remote.¹⁸⁵ In addition, such searches are

Human Services, and the Department of the Interior have all outsourced patent searches in connection with legal services. See William V. Luneburg, *Contracting By the Federal Government for Legal Services: A Legal and Empirical Analysis*, 63 NOTRE DAME L. REV. 399, 471-77 app. A (1988). Such general, “state-of-the-art” patent searches, however, are not necessarily commensurate with the comprehensive search conducted by a patent examiner upon which a quasi-judicial patentability decision depends. See *supra* notes 132-134 and accompanying text. Moreover, an applicant does not have a duty to conduct a prior art search at all, much less a search of sufficient rigor and thoroughness upon which an examiner’s patentability decision depends. See MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 609, at 600-718 (“There is no requirement that an applicant for a patent make a patentability search.”); see also *FMC Corp. v. Hennessy Indus., Inc.*, 836 F.2d 521, 526 n.6 (Fed. Cir. 1987) (“As a general rule, there is no duty to conduct a prior art search, and thus there is no duty to disclose art of which an applicant could have been aware.”).

179. See, e.g., *House Hearing on USPTO Reform*, *supra* note 9, at 126 (statement of Joseph L. Ebersole, Counsel, Coalition for Patent and Trademark Information Dissemination).

180. *Id.*

181. See *supra* note 144.

182. *House Hearing on USPTO Reform*, *supra* note 9, at 126 (statement of Joseph L. Ebersole, Counsel, Coalition for Patent and Trademark Information Dissemination).

183. See Part II.A *supra*.

184. *House Hearing on USPTO Reform*, *supra* note 9, at 126 (statement of Joseph L. Ebersole, Counsel, Coalition for Patent and Trademark Information Dissemination).

185. See S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 14 (noting that the USPTO cannot undertake a “validity search” of several weeks’ duration, which includes an inspection of every possible publication, no matter how remote). In fact, clients are only willing to spend limited sums on patentability searches; however, they are willing to spend thousands of dollars for validity searches. See Welsh, *supra* note 9, at 77. Indeed, the time spent conducting a patentability search is only a fraction of the time spent conducting a validity search. See *id.*

neither practical nor expected by a government agency with limited resources and an ever-increasing application backlog.¹⁸⁶

C. What Will Be the Effect on the Validity Presumption and Public Confidence in Patents Searched by a Decertified CSS?

In his testimony to Congress, a representative of the IP Law Section of the ABA noted, "If the [e]xaminer does not do the search, it will not be done as well, which would weaken the presumption of . . . validity."¹⁸⁷ Concern has also been expressed regarding the effect on the validity presumption for patents searched by a CSS that is later decertified by the USPTO.¹⁸⁸ The situation appears analogous to obtaining a degree from a university, which, although accredited at the time of graduation, later loses its accreditation. Although the degree was conferred by an accredited institution, the negative impact of the institution's subsequent loss of accreditation would inevitably affect the perceived value of the degree.

A similar type of negative public perception could taint an otherwise valid patent searched by a later-decertified CSS.¹⁸⁹ If the presumption of validity is weakened, the patent's certainty is also weakened, a fact which can ultimately affect investor confidence and investment in new technology.¹⁹⁰ Thus, even if a patent's presumption of validity is legally unaffected if searched by a later-decertified CSS, the negative public perception attached to such patents could have a detrimental impact on investor confidence in those patents.¹⁹¹

D. The Search and Examination Functions Are Inextricably Intertwined

The prior art search process necessarily involves a substantive examination. For example, an examiner's statutory obviousness

186. S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 14.

187. *House Hearing on USPTO Reform*, *supra* note 9, at 49 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association).

188. *Id.* at 49-50.

189. *Id.* at 49 (concluding that the public would have little confidence in a private sector search firm tasked with protecting the public interest).

190. *See id.* at 44; *see also* Lehman, *supra* note 58, at 21 ("[I]nvestors who provide much-needed capital to innovators on the basis of patents act under the assumption that patents granted in the United States have been properly examined and can be presumed to be valid in the event of a challenge.").

191. *See* Lehman, *supra* note 58, at 21 ("The quality and trustworthiness of the examination system is at the core of investor confidence in many high-tech companies."). *Cf. House Hearing on Patent Quality*, *supra* note 9, at 26 (statement of David Martin, Chief Executive Officer of M-CAM, Inc.) (noting that investors in one company lost over \$330 million in one day due to its reliance on U.S. patents later found invalid because of overlooked prior art during examination).

determination¹⁹² relies heavily upon the iterative decision-making process that occurs during a prior art search.¹⁹³ When a certain feature becomes important during a search, “the [e]xaminer can adjust the search accordingly to find the best art with respect to that element.”¹⁹⁴ Moreover, when formulating obviousness rejections, U.S. examiners must find each element of an inventive combination in the prior art and a motivation to combine various features – a requirement unique to U.S. patent law.¹⁹⁵ While a private searcher may find individual claimed features, the searcher may not find the subtle teachings to combine the features critical to a sound obviousness decision.¹⁹⁶ Indeed, many private

192. See 35 U.S.C. § 103(a) (2000). In determining obviousness, examiners must: (1) determine the scope and content of the prior art; (2) ascertain the differences between the prior art and the claims at issue; (3) resolve the level of ordinary skill in the art; and (4) evaluate evidence of secondary considerations suggesting nonobviousness. See *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Moreover, examiners must apply 35 U.S.C. § 103 in light of the following factors: (1) the claimed invention must be considered in its entirety; (2) the references must be evaluated as a whole and must suggest the obviousness of making the combination; (3) the references must be viewed without hindsight afforded by the claimed invention; and (4) obviousness must be viewed under the standard of a reasonable expectation of success. *Hodosh v. Block Drug Co.*, 786 F.2d 1136, 1143 n.5 (Fed. Cir. 1986).

193. *House Hearing on USPTO Reform*, *supra* note 9, at 49 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association).

194. *Id.*

195. *Id.* See generally *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (“This court has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.”).

196. *House Hearing on USPTO Reform*, *supra* note 9, at 49 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association). Also, the Federal Circuit has held that a “trend” in the prior art may be a significant factor in obviousness determinations. See *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998). In fact, a trend in the art may provide sufficient suggestion to modify a prior art reference in accordance with the trend. *Id.* Because examiners have unparalleled experience searching and examining patent applications in specialized technology areas on a daily basis, examiners would be particularly cognizant of trends in their respective arts. See *infra* Part IV.A. See generally *supra* notes 39-42 and accompanying text. Furthermore, deciding whether it is obvious to combine references involves a factual inquiry that must be “thorough and searching.” *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52 (Fed. Cir. 2001). This factual inquiry is dependent upon the level of ordinary skill in the art to which the invention pertains. *Id.* at 1351. The court further explained:

Where the level of skill is high, one may assume a keener appreciation of nuances taught by the prior art. Similarly, appreciation of the differences between the claims in suit and the scope of prior art references—a matter itself informed by the operative level of skill in the art—informs the question of whether to combine prior art references.

searchers have little or no knowledge of patent law.¹⁹⁷ Even if one assumes that private searchers are aware of the statutory obviousness standards, under the *Strategic Plan*, private firms would not actually decide patentability with the public interest in mind.¹⁹⁸ In addition, it is unlikely that private firms would be privy to certain evidence in the record, including compelling arguments and data, which could suggest the impropriety of combining certain references.¹⁹⁹

Furthermore, the very nature of *ex parte* prosecution²⁰⁰ is inherently biased in favor of the applicant,²⁰¹ which renders outsourcing searches to private vendors inappropriate. Continued reiteration of views favorable to the applicant during *ex parte* prosecution inevitably pressures

Id. Thus, the level of skill in the art and the appreciation of the differences between the claimed subject matter and the scope of the prior art are factors that directly influence the question of whether to combine references. *See id.* As noted by one commentator, private searchers tend to be generalists while examiners are generally accepted as experts in their respective arts. *See* Grantham, *supra* note 56, at 8 (characterizing the private sector searcher as a generalist who “looks for broad teachings based on a limited disclosure,” whereas an examiner is recognized as an expert who has acquired a “feel for patentability based on awareness of the historical aspect of specific art”). Therefore, unlike an examiner, a generalist may not have the requisite skill in the art or knowledge of its evolution to appreciate its nuances fully. *See id.* As a result, a private searcher may not possess the skill needed to decide whether it would be obvious to combine certain references while conducting a prior art search. *See id.* Consequently, in the process of searching, the private searcher may simply dismiss, and therefore not retrieve, patents that an examiner would find critical to justify combining certain references. *See generally* Welsh, *supra* note 9, at 90 (noting that “many searches are merely ‘farmed out’ to individuals having little, or no, true knowledge of [patent law]”).

197. *See* Welsh, *supra* note 9, at 89-90.

198. *See generally* Lindsey v. United States, 778 F.2d 1143, 1145-46 (5th Cir. 1985) (noting that the examiner’s patentability determination necessarily involves decision-making that weighs “considerations of social, economic, and political policy”); *see also* S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 26 (noting that because there is no general advocate for the public interest, “[t]he examiner must act as a court of original jurisdiction and at the same time protect the public interest against the grant of invalid patents as well as patents of unduly broad scope”); Smith, *supra* note 122, at 169 (“[The examiner’s] client is the public at large.”).

199. *See* 35 U.S.C. § 122(a) (2000) (mandating that patent applications be kept confidential by the USPTO). Moreover, examiners must evaluate evidence in the record of secondary considerations suggesting nonobviousness. *See, e.g.,* Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966). In view of the confidentiality of this evidence, it would therefore likely be known only by the patent applicant, the applicant’s representative, and the USPTO. *See* 35 U.S.C. § 122(a) (2000). *See generally* *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (“[P]atentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument.”).

200. *See supra* note 29 (describing the *ex parte* procedure).

201. *See* S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 26-27.

examiners to allow the application.²⁰² This inherent bias is counterbalanced, however, by the challenge of discovering the best prior art and is a source of genuine satisfaction for examiners.²⁰³ Examiners routinely meet this challenge by exercising their best efforts to discover compelling references that disclose the claimed limitations.²⁰⁴ Moreover, the check and balance function of the examiner's search neutralizes any potential misrepresentations made by the applicant about the scope and content of the prior art.²⁰⁵ Without the check and balance system, the inherent bias favoring the applicant might unduly influence the examiner's decision to allow an otherwise unpatentable invention.

Additionally, the EPO's BEST program strongly suggests that searching the prior art is an essential component of examination.²⁰⁶ In 1993, the EPO abandoned a split search and examination system in favor of a combined system.²⁰⁷ To date, BEST's demonstrated success has motivated the EPO to fully implement the program between 2004 and 2006.²⁰⁸ Thus, the success of the combined system strongly suggests that combining the search and examining functions is fundamental to efficient and consistent examination.²⁰⁹

202. *Id.*; see also Lemley, *supra* note 24, at 1496 n.3 (arguing that examiners "have a strong incentive to issue patents to persistent applicants, rather than to continue rejecting the applications").

203. See S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 27. *But see* Wegner, *supra* note 73, at 6 n.3 ("Historically, one of the negatives of the job of a [p]atent [e]xaminer has been the large amount of time required for searching for prior art, a mind-numbing task of minimal intellectual stimulation, at best.").

204. S. JUDICIARY COMM. STUDY NO. 29, *supra* note 47, at 27.

205. See Dienner, *supra* note 15, at 153-54 (noting that the examiner's own search functions as a "check upon the applicant's representations as to the prior art"); see also Berliner, *supra* note 132, at 416 (warning that a substandard search performed by a private searcher may give the applicant a "false impression" that the invention is patentable).

206. Marandon, *supra* note 80, §§ 1-2.1; see also *House Hearing on USPTO Reform*, *supra* note 9, at 50 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association) ("The best testament against separating the search function and an examination function is the fact the European Patent Office, which has had such a system for years, has recently decided to abandon it."); McDonald, *supra* note 87, at 467 (noting that the BEST project "has been expanded with positive results").

207. See Marandon, *supra* note 80, § 1.

208. See *supra* note 88 and accompanying text.

209. *But see* JAPAN PATENT OFFICE (JPO), *The Roles of Bodies Supporting the Development of Industrial Property System*, at 20-21, 34 (describing the JPO's establishment of the Industrial Property Cooperation Center (IPCC) as a search organization to assist the agency by conducting prior art searches on behalf of examiners), available at <http://www.apic.jiii.or.jp/facility/text/6-02.pdf> (last visited Apr. 20, 2003) [hereinafter JPO, *Supporting the Development of Industrial Property System*]. While the official Japanese examination guidelines state that the examiner should carry out the prior art search, JPO examiners nevertheless rely on the IPCC's search results. See JPO, *Examination Guidelines*, *supra* note 73, at 3-5. Although originally created to build and

It could be argued that the split search and examination system worked satisfactorily for the EPO prior to BEST.²¹⁰ Thus, according to this contrary view, the EPO adopted BEST merely to increase productivity and efficiency, not to improve search quality. BEST was implemented, however, with search quality enhancements in mind.²¹¹ A noted advantage of BEST is the elimination of the inevitable inconsistencies encountered when multiple examiners are involved in the examination process.²¹² For example, BEST reduces the risk “that a substantive examiner will cite an additional document not cited by the search examiner”²¹³ and eliminates any chance of a “sudden divergence of opinion” between the search and substantive examiners.²¹⁴ This benefit enhances search quality. Additionally, BEST eliminates the possibility that the substantive examiner might view the search examiner’s work as inadequate and simply dismiss the search examiner’s prior art or analysis.²¹⁵ When the substantive examiner also performs the search, however, the cited prior art will inevitably match the substantive examiner’s reasoning and analysis.²¹⁶

E. The Practical Consequences of Outsourcing the Prior Art Search Could Actually Diminish the Efficiency Benefits Sought To Be Achieved by the Strategic Plan

Even if it were legally appropriate to outsource the prior art search, the patent system could suffer adverse practical consequences. For example, substantial prosecution delays and additional costs could result from examiners’ increased use of Rule 105 to obtain additional

maintain a search database and indexing system, the IPCC was designated in 1990 as a full-fledged search organization to assist Japanese examiners in view of JPO’s “budgetary and organizational limitations.” JPO, *Supporting the Development of Industrial Property System*, *supra*, at 20, 21; *see also Frequently Asked Questions*, *supra* note 7, at Q-9 (noting that the IPCC conducts over 100,000 searches annually for the JPO and consists of industry professionals rather than former examiners); Brenda Sandburg, *PTO’s Destination: Silicon Valley*, *RECORDER*, June 29, 1999, at 6 (alluding to the *Strategic Plan’s* outsourcing proposal by suggesting that the USPTO would consider the JPO’s practice of contracting out some of its searching).

210. *See supra* note 209 (discussing the quality of the Japanese split search and examination procedure).

211. Marandon, *supra* note 80, § 2.

212. *Id.* § 2.4.

213. *Id.*

214. *Id.*

215. *See, e.g.*, *MANUAL OF PATENT EXAMINING PROCEDURE*, *supra* note 15, § 704.01, at 700-06 (noting that while full faith and credit should be given to a previous examiner’s work, an examiner should not defer to the previous examiner if “there is a clear error in the previous action or knowledge of other prior art.”)

216. *See* Marandon, *supra* note 80, § 2.4.

information deemed “reasonably necessary” for examination.²¹⁷ Currently, examiners rarely invoke Rule 105 because its use is governed by policies established by each USPTO Technology Center.²¹⁸ Typically, the USPTO limits the use of Rule 105 to applications that disclose technology not readily found in patents, but more likely to appear in commercial databases.²¹⁹

Therefore, if required to rely on private-vendor searches for patentability decisions, any examiner, regardless of technology area, could routinely invoke Rule 105.²²⁰ If an examiner believed that the commercial prior art search failed to meet the minimum quality threshold for proper examination, the examiner could simply invoke Rule 105.²²¹ While arguably such a system would enhance search quality, it is unclear whether any search quality enhancements would justify the practical consequences.²²² Such a system might impose delays in prosecution²²³ and increase applicants’ costs in the event that an examiner required additional searching.²²⁴

217. See Thomas, *supra* note 124, at 749-50.

218. Changes to Implement the Patent Business Goals, 65 Fed. Reg. 54,604, 54,634 (Sept. 8, 2000) (to be codified at 37 C.F.R. pts 1, 3, 5, & 10). *But see* Thomas, *supra* note 124, at 749-50 (suggesting that Rule 105 is used sparingly because to do otherwise would require expending scarce resources and would be repugnant to the examiner’s incentive structure).

219. Changes to Implement the Patent Business Goals, 65 Fed. Reg. 54,604, 54,633-35 (Sept. 8, 2000) (to be codified at 37 C.F.R. pts 1, 3, 5, & 10); *see also* Thomas, *supra* note 124, at 749 (“Few patent attorneys have faced a Rule 105 request because examiners appear reluctant to make them.”).

220. See 37 C.F.R. § 1.105 (2002); *see also* MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 704.11(b), at 700-08.

221. See Changes to Implement the Patent Business Goals, 65 Fed. Reg. at 54,633 (noting that the use of Rule 105 by USPTO employees is encouraged “so that the Office can perform the best quality examination possible”); *see also* 37 C.F.R. § 1.105 (2002); *Frequently Asked Questions*, *supra* note 7, at Q-12 (noting that examiners may use their authority under Rule 105 to obtain supplemental information from the applicant when a supplemental search is needed in view of claim amendments or omission of material cites); 37 C.F.R. § 1.105 (2002); MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 15, § 704.11(b), at 700-08.

222. See Changes to Implement the Patent Business Goals, 65 Fed. Reg. at 54,634 (suggesting the negative consequences of allowing proposed Rule 105).

223. See *id.* (noting that one objection to proposed Rule 105 was that it would “slow the examination process”).

224. See generally Lemley, *supra* note 24, at 1510 (estimating that “requiring prior art searches would add between \$8,000 and \$10,000 to the cost of patent prosecution in most cases”). *But see* Kent Hoover, *Inventors Fight Outsourcing Searches for New Patents*, BUS. J. TAMPA BAY, July 29, 2002 (estimating the fee for hiring a private search firm to be \$1,000), available at <http://tampabay.bizjournals.com/tampabay/stories/2002/07/29/story6.html> (last visited Jan. 31, 2003). *But cf.* House Hearing on USPTO Reform, *supra* note 9, at 127 (statement of Joseph L. Ebersole, Counsel, Coalition for Patent and Trademark Information Dissemination) (arguing that outsourcing searches could reduce costs to the

In addition, an examiner who relies on outsourced searches might depend more heavily on “official notice” as a matter of practicality.²²⁵ Currently, an examiner may take official notice “of facts beyond the record which . . . are capable of such instant and unquestionable demonstration as to defy dispute.”²²⁶ Therefore, if from experience, an examiner believes that pertinent prior art is lacking from the commercial search, an examiner might take official notice of the omission rather than require the applicant to provide a reference. Official notice would be a more expedient measure compared to imposing additional burdens on the applicant under Rule 105.²²⁷ Recent Federal Circuit decisions, however, disfavor official notice.²²⁸ Consequently, if examiners increasingly resort to official notice, their patentability decisions may frequently be reversed on appeal.

IV. A THREE-PRONGED ALTERNATIVE TO OUTSOURCING

Despite the aforementioned problems with outsourcing prior art searches, contracting out certain limited search activities to private vendors has promise. Used in concert with the examiner’s expertise in searching patents, the expertise of a CSS in searching non-patent literature could greatly enhance and complement the examiner’s efforts, resulting in a more comprehensive search and, ultimately, a stronger patent. Accordingly, the following prior art search regimen for every application is suggested: (1) examiners should possess the ultimate responsibility to search all prior art, including U.S. and foreign patents; (2) a CSS would be utilized in every case with the responsibility to search

USPTO by taking advantage of private sector investment in search system improvements, thereby enabling the USPTO to redirect its funding for other purposes).

225. Lance Leonard Barry, *Did You Ever Notice? Official Notice in Rejections*, 81 J. PAT. & TRADEMARK OFF. SOC’Y 129, 131 (1999) (justifying the examiner’s use of official notice because it enables “the examiner to use time efficiently to make a speedy and just determination of issues . . . [and] . . . free[s] the examiner from having to spend unnecessary time finding a reference to prove the existence of a fact well known at the time of an invention”).

226. *In re Ahlert*, 424 F.2d 1088, 1091 (C.C.P.A. 1970). *But see In re Eynde*, 480 F.2d 1364, 1370 (C.C.P.A. 1973) (“The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of [judicial] notice.”).

227. *See Barry, supra* note 225, at 131 (justifying the examiner’s use of official notice for greater efficiency and practicality).

228. *See Thomas, supra* note 124, at 753 (noting that “[r]ecent Federal Circuit case law suggests that the USPTO may have to reduce its reliance upon official notice”); *see also House Hearing on Patent Quality, supra* note 9, at 23 (statement of Jeffrey P. Kushan, Partner, Powell, Goldstein, Frazer, & Murphy, LLP) (noting that examiners rarely invoke official notice because the applicant can negate its substance by simply challenging the examiner to produce evidence supporting his assertion).

non-patent literature; and (3) all applications should have an automated search performed, utilizing comprehensive, state-of-the-art text, linguistics, and image-analysis capabilities.

A. The U.S. Patent Examiner Is Best Suited To Conduct the Patent Search

According to the IP Law Section of the ABA, U.S. examiners “perform the best, highest quality searches in the world.”²²⁹ This search expertise stems largely from examiners’ highly specialized knowledge and experience,²³⁰ which span over 1200 technology classifications.²³¹ The

229. *House Hearing on USPTO Reform*, *supra* note 9, at 49 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association); *see also* Sherwood et al., *supra* note 144, at 480 (“[P]atent office examiners offer a greater likelihood of high-quality examination [than outside contractors] because they have been trained to conduct examinations, and it is the only work they do.”). Moreover, full-time patent examiners have a higher level of credibility than outside contractors because contractors “will be only as good as their familiarity with search techniques and their access to the world’s body of scientific and technical information.” *Id.* *But see* Lemley, *supra* note 24, at 1528 (noting that examiners “regularly miss the most relevant prior art”); *Frequently Asked Questions*, *supra* note 7, at Q-9 (concluding that when the Office of Patent Quality Review (OPQR) needs to reopen an application to make a prior art rejection, over fifty percent of such occurrences were due to the discovery of new prior art by reviewers who are generalists); *House Hearing on Patent Quality*, *supra* note 9, at 61 (statement of Michael K. Kirk, Executive Director, American Intellectual Property Law Association) (“[E]xaminers sometimes don’t find the best prior art, and sometimes when they do, their judgments are [a] little bit short”); Wegner, *supra* note 64, at 337-38 (concluding that the European search is “the best in the world” in view of the “brilliant” searches performed by the treaty-based corps of EPO career examiners).

230. *See* Welsh, *supra* note 9, at 80 (stating that “[e]xaminers . . . are experts in the art”); *see also* *House Hearing on USPTO Reform*, *supra* note 9, at 89 (statement of Ronald J. Stern, President, Patent Office Professional Association) (“[A]s an examiner continues to search in a particular technology area, the examiner becomes more and more familiar with the prior art in that technology” and they develop “such a level of expertise that they are regarded as experts in their technologies both within and outside the USPTO.”). *Cf.* Sherwood et al., *supra* note 144, at 480 (concluding that because few people are acquainted with more than one field of technology, a competent examination system requires at least one examiner for each technical field, thus requiring a minimum of 200 examiners to examine all technology areas adequately). *But see* Grantham, *supra* note 56, at 9 (concluding that the USPTO is gradually losing its “expert edge” resulting from the agency’s increased emphasis on faster application processing and text search techniques). Moreover, the retirement of “old school” examiners with extensive accumulated knowledge of the art is diminishing institutional expertise. *Id.* While much of the evidence is anecdotal, there appears to be a perception among some public searchers of a general decline in examiner search expertise. *See, e.g.,* Randy Rabin, *If You Come to the USPTO to Work, Bring Your Own Desk*, INTELL. PROP. TODAY, May 2002, at 60. Randy Rabin, a professional patent searcher, observes:

In years past, consulting an examiner for help on a search typically led him or her to instantly point to appropriate subclasses, and often a visit to the shoes [patent files] to see the very patents brought to mind. More recently, searchers who regularly consult examiners have commented on what they sense as a loss of expertise on the part of examiners. Now, an examiner turns 90 degrees to his

volume and scope of examiner expertise encompass the entire spectrum of human inventive effort.²³² Such breadth and volume of technological expertise are unlikely to be matched by any single private company.²³³

Also, the USPTO is currently more likely to find documents that the agency itself generates.²³⁴ During prosecution, examiners can draw

computer, sometimes appearing as perplexed as his visitor, and begins to perform what might be a duplicate of the text search his hopeful visitor has already tried.

Id.

231. See Allison & Lemley, *supra* note 128, at 92 (noting the USPTO's classification scheme has over 1200 categories); see also *House Hearing on USPTO Reform*, *supra* note 9, at 126 (statement of Joseph L. Ebersole, Counsel, Coalition for Patent and Trademark Information Dissemination) (noting that the USPTO "has the greatest single concentration of technical expertise that exists anywhere in the world"); Cockburn, *supra* note 26, at 4 (noting that the USPTO receives "more certified mail each day than any other single organization in the world" and "is staffed by over 3000 patent examiners" and stating that the work allocation at the USPTO promotes specialization and that individual examiners "may be responsible for nearly all of the applications within specific classes or subclasses"). But see *Frequently Asked Questions*, *supra* note 7, at Q-9 (noting that, unlike examiners, reviewers from the Office of Patent Quality Review (OPQR) are generalists who have shown they can search as well as examiners, evidenced by the fact that over fifty percent of applications that were reopened due to claim rejections over prior art were due to the discovery of new prior art found by OPQR reviewers).

232. See *House Hearing on USPTO Reform*, *supra* note 9, at 89 (statement of Ronald J. Stern, President, Patent Office Professional Association) ("Where else can one find a single collection of engineers and scientists with the collective expertise to examine anything from safety pins to atom bombs; from fishing lures to genetically engineered plants and animals?"). But see *Frequently Asked Questions*, *supra* note 7, at Q-9 (noting that in Japan, the Industrial Property Cooperation Center (IPCC) conducts over 100,000 searches per year for examiners and consists of industry professionals—not former examiners—thereby suggesting that a similar large, untapped resource of private industry professionals exists in the United States who could conduct searches for U.S. examiners).

233. See *House Hearing on USPTO Reform*, *supra* note 9, at 89 (statement of Ronald J. Stern, President, Patent Office Professional Association) ("The USPTO represents the single largest accumulation of technological expertise in the federal government."); David Testardi, *Comments on 21st Century Strategic Plan*, at 3 (suggesting that "[t]he Examiners who work day-in and day-out in a particular technology are the most qualified to perform the International Search" because, unlike private contractors, examiners possess a greater depth of technological understanding and historical knowledge of the art that comes from experience), at <http://home.earthlink.net/~datestardi/comments.pdf> (last visited Jan. 31, 2003). In fact, one commentator even proposed the remarkable idea of the USPTO capitalizing on the search expertise of its examiners by selling fee-based searches to the public as a profit-generating enterprise. See Harry Jacobson, *Commentaria, Official Searches by Patent Office*, 36 J. PAT. OFF. SOC'Y 750, 750-51 (1954). But see *House Hearing on USPTO Reform*, *supra* note 9, at 170 (2002) (statement of Joseph L. Ebersole, Counsel, Coalition for Patent and Trademark Information Dissemination) (arguing that while no private sector organization would match the breadth of U.S. examiner expertise, that mismatch should not be a reason to prohibit outsourcing searches but should merely be one of the facts considered for certification requirements and training).

234. Allison & Lemley, *supra* note 128, at 102.

upon their knowledge of patents that they previously examined, particularly in highly specialized areas.²³⁵ Therefore, in view of the breadth of examiner technological expertise, the strong link between the search and patentability determination, and the greater likelihood of the examiner finding relevant patents, the U.S. examiner is best suited to conduct the patent search.

B. The Use of a CSS Should Be Limited and Should Focus Primarily on Non-Patent Literature

The CSS search should not be a substitute for an examiner's search. Instead, the examiner should continue to conduct the entire prior art search. Thus, the CSS search would serve merely as an enhancement to the examiner's search.

The limited use of a CSS would be a boon to examiners, particularly for technologies where the prior art is predominantly non-patent literature. For example, a CSS's findings could relieve the examiner's burden of finding inventive features in obscure non-patent documents and could suggest additional search areas. Moreover, the search results that a CSS submits to the examiner might serve as a starting point for finding additional prior art that teaches combining references critical to obviousness decisions. Such subtle teaching references might not be apparent to a CSS searcher.²³⁶ Lastly, the examiner could combine the CSS's expertise in searching non-patent literature with the examiner's expertise in searching patents.²³⁷ The combined expertise of examiners and CSSs would likely result in a more comprehensive search and, ultimately, a stronger patent.²³⁸

C. Every Application Should Be Subjected to an Automated Search Tantamount to Data Mining

In addition to the search efforts of the examiner and the CSS, the USPTO should automatically search every application using the most effective, state-of-the-art text, linguistics, and image-analysis technology

235. Cockburn, *supra* note 26, at 9.

236. *House Hearing on USPTO Reform*, *supra* note 9, at 49 (statement of Charles P. Baker, Chair, Intellectual Property Law Section, American Bar Association).

237. *See* Cockburn, *supra* note 26, at 6 (noting that the extent to which examiners search non-patent literature "may be a function of the nature of the technology, maturity of the field, and the ease with which it can be searched"). *But see* Allison & Lemley, *supra* note 128, at 138 (concluding that computer searching may explain why examiners cite ten times as much non-patent prior art as they did in the 1970s).

238. *See* King, *supra* note 25, at 22 (concluding that if examination quality increases, the risk of expensive litigation will decrease in view of fewer patents subjected to court review).

available.²³⁹ Such an automated system should include a computerized analysis of the text and figures of a patent application, an automatic computerized database search based on that text and image analysis, and automatic retrieval of the most relevant documents for consideration. This system would utilize the expertise of both the examiner and the CSS and take advantage of sophisticated technology to locate automatically prior art that is otherwise impossible or impractical to find.²⁴⁰ Essentially, the automated search component would be a data mining operation, maximizing the chance of finding obscure documents not readily found using conventional search methods.²⁴¹ As technology progresses,

239. See Liza Vertinsky & Todd M. Rice, *Thinking About Thinking Machines: Implications of Machine Inventors for Patent Law*, 8 B.U. J. SCI. & TECH. L. 574, 607-08 (2002) (proposing that the USPTO utilize the search and pattern recognition capabilities of computers for searching and prior art analysis); see also Elizabeth D. Liddy & Michael L. Weiner, *Intelligent Text Processing and Intelligence Tradecraft*, J. ASS'N FOR GLOBAL STRATEGIC INFO. (1995), at 7 (concluding that if the patent office had access to a powerful, linguistically informed search system able to overcome complexities and ambiguities of language, all applications should be subjected to such a search), available at <http://www.damas.ift.ulaval.ca/~coursIA2/Fichiers/itextpro.pdf> (last visited Sept. 28, 2002) (on file with author); Thomas, *supra* note 124, at 757 ("Patent searching should become increasingly automated and its results presented to the applicant prior to the First Office Action.").

240. See Liddy & Weiner, *supra* note 239, at 7. A sufficiently powerful automated search tool could search "not only newspapers, journals, magazine[s], abstracts, and bibliographies, but also entire reference books, specialized encyclopedias, and even the plethora of doctoral dissertations These all represent significant amounts of prior art that we know may exist . . . but ha[ve] been heretofore impractical to search." *Id.*; see also Lehman, *supra* note 58, at 23 ("Clearly, what is needed is a single database of all the relevant existing publications, and an engine superior to anything now in use to search this database . . . [using] artificial intelligence attributes not currently available in the search technologies employed by the USPTO, the EPO, or the JPO."); Schwartz, *supra* note 46, at 808 (arguing that a "mechanized" search will strengthen the presumption of validity because the extension of the field of search will eliminate the possibility of missing pertinent art); *Thermo King Corp. v. White's Trucking Serv., Inc.*, 292 F.2d 668, 676 n.11 (5th Cir. 1961) (conceding the impossibility of manually searching the USPTO patent files effectively and noting the promise of computer-based solutions to aid the agency in its search efforts). An interesting potential benefit of an automated search is the simplification of the examiner's task of combining references for obviousness determinations by automatically finding primary references. See Schwartz, *supra* note 46, at 807. *But see In re Mines Tire Co.*, 194 B.R. 23, 26 (Bankr. W.D.N.Y. 1996) (warning that while computer searching has vast potential, it "can never replace human judgment and discretion . . . [and] users must learn to recognize its shortcomings . . . [in order to] achieve the benefits of computer precision without jeopardizing the accuracy of a diligent human searcher").

241. See generally Peggy Zorn et al., *Finding Needles in the Haystack: Mining Meets the Web*, ONLINE, Sept./Oct. 1999, at 17-18 (defining data mining as "analyzing the data in large databases to identify trends, similarities, and patterns to support managerial decision making"); Susan Mendelsohn, *Patterns Formed by a Single Shot of Malt*, INFO. WORLD REV., Aug. 1, 2000, at 25 (discussing the use of data mining tools in patent research); E.E. Mazier, *Insurers Look To Strike Gold with Data Mining Technology*, NAT'L

increasingly powerful search and analysis capabilities will continually improve the automated search component.

V. CONCLUSION

Outsourcing the examiner's prior art search to commercial vendors is fraught with legal and practical problems. Indeed, a patent examiner's decision-making function is so dependent upon the prior art search results that they essentially dictate the outcome of the patentability decision.²⁴² In addition, in view of the exclusive constitutional and statutory rights at stake,²⁴³ any negative impact on the prior art search to maximize profits could infringe the constitutional rights of the patent owner, as well as others excluded from making, using, or selling the invention.²⁴⁴

Moreover, the decision-making functions of both the patentability determination and prior art search are inextricably intertwined and cannot be reasonably separated. Thus, the prior art search is an inherently governmental function that cannot be appropriately outsourced. Contracting out this critical activity would seriously erode a patent's presumption of validity and ultimately jeopardize public confidence in the patent system. Outsourcing limited search functions to private vendors, such as non-patent literature searches, however, might serve as an excellent complement to the examiner's overall prior art search.

Therefore, an ideal system would combine: (1) examiners conducting the search, making use of their expertise in searching U.S. and foreign patents; (2) private vendors specializing in non-patent literature, augmenting the examiner's search; and (3) an automatic data mining operation effectively searching obscure areas otherwise impossible or impractical to search. Such a system would utilize the examiner's patent searching expertise, the private vendor's non-patent literature searching

UNDERWRITER: PROPERTY & CASUALTY/RISK & BENEFITS MGMT. EDITION, Sept. 30, 2002, at 10 (reporting on the insurance industry's positive results achieved with data mining and characterizing the technique as a productive way to process enormous amounts of information "that can then be validated through other means").

242. See *supra* note 129 and accompanying text.

243. See U.S. CONST. art. I, § 8, cl. 8; 35 U.S.C. §§ 154(a), 271(a) (2000); Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945).

244. The Constitution gives Congress the authority to "secur[e] for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries." U.S. CONST. art. I, § 8, cl. 8. Accordingly, once a patent is granted, the patentee can exclude others from making, using, or selling the invention for twenty years from the filing date of the patent application. See 35 U.S.C. §§ 154(a), 271(a) (2000).

expertise, and powerful, state-of-the-art search technology.²⁴⁵ This three-pronged, synergistic approach would likely ensure the most comprehensive and effective search practicable, preserving the presumption of validity for each granted patent.

245. See Cottone, *supra* note 134, at 235-36 (concluding that prior art search effectiveness is enhanced by using many search approaches rather than increasing the amount of effort expended on a single approach); see also *House Hearing on Patent Quality*, *supra* note 9, at 68 (statement of James F. Cottone, President, National Intellectual Property Researchers Association) (concluding that to most effectively find patents, “automated searching and manual searching must exist side-by-side”).