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PATENT REEXAMINATION AND THE PTO: COMPTON'S PATENT INVALIDATED AT THE COMMISSIONER'S REQUEST

I. INTRODUCTION

The United States Constitution¹ gives Congress the authority to issue a patent to an inventor who "invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."² Congress delegated such authority to the United States Patent and Trademark Office ("PTO").³ The PTO, in accordance with the Patent Act,⁴ accepts and examines applications⁵ and issues patents.⁶ Once the PTO issues a patent, the patent is presumed valid.⁷ However, this presumption of validity does not apply to patents

1. "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 8.

2. "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. §101 (1993).

3. The United States Patent and Trademark Office was established in the following manner:

The P.T.O. is an office headed by a Commissioner within the Department of Commerce. The Patent Office was created in 1836 and renamed in 1975 to reflect its dual functions. Staffed by a large body of skilled employees, it accepts and examines applications for the issuance of patents on inventions and for the registration of rights in trademarks, service marks, certification marks and collective marks. To prosecute such applications on behalf of clients, an attorney or patent agent must be admitted to practice before the P.T.O. The Office publishes a weekly *Official Gazette* with information on registrations and issued patents and maintains files open to the public.

1 DONALD S. CHISUM, PATENTS G1-15,16 (1993).

4. The Patent Act refers to 35 U.S.C. §§ 1-376.

5. The examination of an application is as follows: "The Commissioner shall cause an examination to be made of the application and the alleged new invention; and if on such examination it appears that the applicant is entitled to a patent under the law, the Commissioner shall issue a patent therefor." 35 U.S.C. § 131 (1993).

6. 1 CHISUM, supra note 3, at G1-16; see also 35 U.S.C. §§ 1-376; Rules of Practice in Patent Cases, 37 C.F.R. §§ 1.1-1.809 (1995).

7. 35 U.S.C. § 282. Furthermore, patent examiners are presumed to be competent in issuing patents. PATRICIA N. BRANTLEY, PATENT LAW HANDBOOK §1.02 (1993-1994). Presumption of validity is defined in the following manner:

undergoing reexamination.⁸ During a reexamination proceeding, the PTO "construe[s] the claims of an expired patent undergoing reexamination in such a way to render the claims valid if possible."⁹

In 1985, two executives at Encyclopedia Britannica, Inc. ("Encyclopedia Britannica") introduced the idea of a multimedia search system that interfaced textual and graphical entry paths in a single database.¹⁰ At that time, Encyclopedia Britannica was not interested in publishing its own volumes of encyclopedias in an electronic format.¹¹ However, Encyclopedia Britannica owned the publishing rights to Compton's NewMedia ("Compton's") Encyclopedia.¹² Approximately one year later, Encyclopedia Britannica decided to make Compton's Encyclopedia the basis of its proposed multimedia encyclopedia.¹³ Encyclopedia Britan-

Each claim of a patent enjoys a presumption of validity. However, invalidity may be asserted by an effected person defensively in a court action for infringement or offensively in a proper action for declaratory judgment. The presumption shifts the burden of proof to the challenger and also requires the court to give some deference [sic] [deference] to the expert determination of the Patent and Trademark Office in granting the patent after examination. Such deference is inappropriate (i.e., the presumption 'weakened') where pertinent items of prior art were not considered by the Office. In such a case, the patentee may strengthen the presumption by applying for a reissue.

1 CHISUM, *supra* note 3, at G1-17; see Nat'l Research Dev. Corp. v. Varian Assoc., Inc., 822 F. Supp. 1121, 1127 (D. N.J. 1993) (stating that "[a] patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim").

8. ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 603 (3rd ed. 1994).

The presumption of validity is a rule of procedure placing the burden of persuasion on one who attacks a patent's validity. There is no such attacker in a reexamination, and hence no one on whom that burden may be placed. The examiner is not attacking the validity of a patent but is conducting a subjective examination of claims in the light of prior art.

Id. "The innate function of the reexamination process is to increase the reliability of the PTO's action in issuing a patent by reexamination of patents thought 'doubtful.'" *Id.* at 601.

9. BRANTLEY, *supra* note 7, § 1.01; see *Ex parte* Bowles, 23 U.S.P.Q.2d 1015, 1019 (Bd. Pat. App. & Int. 1991) (holding that claims susceptible to two constructions should be construed to secure the patent); see also HARMON, *supra* note 8, at 604 (stating that "[c]laims subject to reexamination will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not to be read into the claims").

10. *Compton's NewMedia Receives Patent for Multimedia Invention*, PR NEWSWIRE, Nov. 15, 1993 at Financial News [hereinafter *Compton's NewMedia Receives Patent*].

11. *Id.*

12. *Id.* Compton's is a multimedia developer based in Carlsbad, California. Tanya Pobuda, *Compton's Lays Claim to Multimedia*, COMPUTER DEALER NEWS, Dec. 13, 1993, at 1. "Today Compton's is a leading producer of interactive information, infotainment, edutainment, and entertainment software on CD-ROM and floppy media." *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News.

13. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News.

nica gathered a team of experts who created proprietary software that met the requirements of Encyclopedia Britannica's proposed multimedia encyclopedia.¹⁴ As a result, on August 31, 1993, the PTO issued United States patent 5,241,671 ("671 patent") for a multimedia search system to fourteen inventors who had previously assigned all their patent rights of the claimed invention to Encyclopedia Britannica.¹⁵

Shortly after the '671 patent issued, Compton's announced at the Comdex/Fall 1993 trade show¹⁶ in Las Vegas, Nevada, that it intended to enforce the '671 patent and to collect royalties and licensing fees from multimedia developers who use the multimedia search system claimed in the '671 patent.¹⁷ Immediately afterwards, multimedia developers complained about Compton's announcement and questioned the validity of the '671 patent.¹⁸ However, instead of pursuing the standard route of requesting reexamination of an issued patent, multimedia developers merely complained about the issuance of the '671 patent without taking any further action.

The PTO announced on December 17, 1993 that the Commissioner of Patents and Trademarks, Bruce Lehman ("Commissioner Lehman"), had taken the rare step of requesting reexamination of the '671 patent.¹⁹ Apparently, the numerous complaints from multimedia developers about the '671 patent pressured Commissioner Lehman into requesting reexamination himself, as opposed to the customary procedure of having an

14. *Id.*

15. U.S. Pat. No. 5,241,671. The '671 patent covers virtually all combinations of text, video and graphics that employs a similar search function. Pobuda, *supra* note 12, at 1.

16. The Comdex trade show is an annual event and the world largest computer exhibition. Pobuda, *supra* note 12 at 1.

17. *PTO, Reexamination*, 47 PTCJ 485 (BNA) No. 1173, at 485 (Mar. 31, 1994). Multimedia developers that employed such a combination of text, video and graphics similar to that disclosed in the '671 patent in their own titles were required to pay a licensing fee or issue royalty checks to Compton's for use of its patent. Pobuda, *supra* note 12, at 1.

18. Jonathan Seybold, *Compton's Patents Multimedia?*, DIGITAL MEDIA, Nov. 16, 1993, at 21; Pobuda, *supra* note 12, at 1.

19. *Patents, Reexamination*, 47 PTCJ 177 (BNA) No. 1150, at 177 (Dec. 23, 1993); *see also* Standard Havens Prod. Inc. v. Gencor Industries Inc., 897 F.2d 511, 514 n.2, (Fed. Cir. 1990) (stating that "[t]he Commissioner initiated less than 1% of all reexaminations over the past eight years, and 93% of those he did initiate resulted in cancellation or amendment of the claims"); Linda Rohrbough, *New Evidence Forces Reexamination of Compton's Patent*, NEWSBYTE NEWS NETWORK, available on Lexis, Dec. 20, 1993 (stating that "[t]his is the second multimedia patent the Patent Office is re-examining"); *see also* 37 C.F.R. § 1.520, which states:

The Commissioner, at any time during the period of enforceability of a patent, may determine whether or not a substantial new question of patentability is raised by patents or printed publications which have been discovered by the Commissioner or which have been brought to the Commissioner's attention even though no request for reexamination has been filed in accordance with §1.510.

37 C.F.R. § 1.520 (1995).

interested third-party request the reexamination.²⁰ New prior art references were submitted by third-parties to aid the PTO in determining whether there was a substantial new question of patentability of the forty-one claims granted in the '671 patent.²¹ As a result, the PTO granted Commissioner Lehman's request for reexamination, reexamined the '671 patent and cancelled all forty-one claims granted in the '671 patent.²² Compton's is currently appealing the PTO's cancellation of the claims.

This Comment asserts that the procedure employed by the PTO to reexamine the '671 patent was inappropriate. The complaining multimedia developers questioned the validity of the '671 patent and Commissioner Lehman appears to have accepted their views. Commissioner Lehman's acceptance of the complaining multimedia developers' views may have resulted in a biased ruling against the enforceability of the '671 patent.

This Comment further asserts that Commissioner Lehman's request for reexamination placed undue pressure on PTO examiners. The PTO examiners must be unbiased when reexamining a patent. A request for reexamination should be based upon patents and printed publications not taken into consideration at the time the patent issued, not upon the Commissioner's or other multimedia developers' personal biases.²³ Unfortunately, Commissioner Lehman's request for reexamination may have biased the PTO examiners into believing there were validity problems with the claims granted in the '671 patent. Commissioner Leh-

20. The request for a reexamination proceeding is conducted in the following manner:

At the request of any person, including the patent owner, or on his own initiative, the Commissioner of Patents and Trademarks may determine that a substantial new question of patentability as to the claims of a patent has been raised by the citation of prior art patents or publications. Upon such a determination, the claims are reexamined according to normal examination procedures. After reexamination, a certificate is entered canceling unpatentable claims, confirming patentable claims, and incorporating amended or new claims.

1 CHISUM, *supra* note 3, at G1-20.

21. "According to Oscar Mastin, public affairs officer at the U.S. Patent and Trademark Office, the process began after the patent commissioner received 'further information' from interested parties that disputed the validity of the claims." *Patent Re-examination Denies Compton's Claim*, COMPUTER DEALER NEWS, April 20, 1994, at 1.

22. *PTO, Reexamination*, 47 PTCJ at 485; *PTO, Reexamination*, 49 PTCJ 56, 56-57 (BNA) No. 1204 (Nov. 17, 1994).

23. See *Nat'l Presto Industries Inc. v. West Bend Co.*, 28 U.S.P.Q.2d 1049, 1052-53 (W.D. Wis. 1993) (stating that the "[p]rior art not considered by the Patent and Trademark Office has no effect on the presumption of validity or the burdens of the parties . . . [h]owever, the burden may be met more easily upon introduction of new prior art 'that is more pertinent or more relevant' than that considered by the Patent and Trademark Office"); see also 37 C.F.R. § 1.552(a) (1995) (stating "[p]atent claims will be reexamined on the basis of patents or printed publications").

man's personal views on the '671 patent may have influenced the PTO examiners, because he was the person who requested reexamination.

Finally, this Comment analyzes the procedure that the PTO employed when it reexamined the '671 patent. Specifically, this Comment analyzes the following: (1) the factual background leading up to Compton's crisis; (2) the PTO's procedure and conclusion reached during the request for reexamination of the '671 patent; (3) the author's position on the procedure employed by the PTO; and (4) the author's conclusion about the beliefs and concerns of impropriety addressed in this Comment.

II. BACKGROUND

A. WHAT IS COMPTON'S CRISIS?

Compton's had patent rights on a broad patent which covered virtually all uses of the CD-ROM.²⁴ As a result, all developers of CD-ROM applications would be required to pay Compton's licensing fees.²⁵ After a great deal of criticism, the PTO conducted a reexamination of Compton's patent and canceled the patent, essentially opening the market.²⁶

Compton's crisis is that it must convince the PTO for a second time that the '671 patent is valid. Compton's invested many years of research and a considerable amount of money developing and defending the claims granted in the '671 patent.²⁷ Multimedia developers claim that the invention disclosed in the '671 patent was not a specific invention, was not a novel invention, and was obvious in 1989.²⁸ Moreover, Commissioner Lehman's personal request for reexamination placed an additional and greater burden on Compton's. Thus, the vast amount of negative publicity against the '671 patent from multimedia developers is making the attempt by Compton's to recover its patent rights for the '671 patent much more difficult.

24. Pobuda, *supra* note 12, at 1.

25. *Id.*

26. PTO, *Reexamination*, 47 PTCJ at 485; PTO, *Reexamination*, 49 PTCJ at 56.

27. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News quoting Norman Bastin, Compton's NewMedia's executive vice president and general manager: "Compton has invested many years and millions of dollars to create a solid, patented foundation of multimedia technology".

28. *Compton's Awarded Patent on Multimedia; Compton's NewMedia's Broad Patent Raises Concerns Over Validity*, THE SEYBOLD REPORT ON DESKTOP PUBLISHING, Dec. 6, 1993, at 7 [hereinafter *Compton's Awarded Patent on Multimedia*]. Three challenges will be asserted against the '671 patent if the validity of the '671 patent is litigated: "[T]hat the patent is too broad (in effect that it is not a specific invention); that the invention is merely an obvious extension of existing technology (that is, it was obvious in 1989); or that there is 'prior art' (the invention is not really new)." *Id.*

B. THE CONCEPTION OF THE MULTIMEDIA SEARCH SYSTEM PATENT

The idea of the multimedia encyclopedia was introduced in 1985.²⁹ Stanley Frank and Norman J. Bastin sought to develop new products that would improve the manner in which information was disseminated.³⁰ At this time, Encyclopedia Britannica was not interested in electronic publishing of its own volumes of encyclopedias.³¹ However, Encyclopedia Britannica owned the publishing rights to Compton's Encyclopedia.³² Approximately one year later, Encyclopedia Britannica decided to make Compton's Encyclopedia the basis of its multimedia encyclopedia.³³ Frank and Bastin sought experts who could create search and retrieval software,³⁴ which would allow for the interaction of text and graphics.³⁵ Frank and Bastin were able to gather a team of experts from various disciplines, and within thirty months the team developed proprietary software.³⁶ The team spent millions of dollars to test the newly developed software in focus groups and to improve the print and photographic content of the software.³⁷

Thereafter, the team of experts filed a patent application in the PTO on October 26, 1989.³⁸ At the same time, Compton's released the Compton's MultiMedia Encyclopedia.³⁹ This multimedia encyclopedia

29. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News.

30. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. In the early 1980s, Stanley Frank was the Executive Vice President and Norman J. Bastin was the Executive Director of corporate planning and development at Encyclopedia Britannica. *Id.* Bastin is currently Compton's Executive Vice President and General Manager. *Id.* Frank and Bastin wanted to develop a product that would surpass what was currently available in print or text-only CD-ROMs, offering flexibility and interactivity. *Id.*

31. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News.

32. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News.

33. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News.

34. Frank and Bastin sought to design "a computer search system for retrieving textual and graphical information through multiple textual and graphical entry paths into a database." U.S. Pat. No. 5,241,671.

35. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. Eduware and Designware were the two initial software companies that Frank and Bastin contacted. *Id.* Jostens Learning Co. and Education Systems Corp. were also contacted to aid in the development of the search and retrieval software. *Id.*

36. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. The team of experts consisted of: "[E]ducational designers, educational consultants, animators, programmers, videographers, marketing gurus and financial analysts." *Id.*

37. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. \$8.5 million was expended to improve the software's print and photographic content. *Id.* "We knew we were going to have ground breaking technology and wanted the same for the content," Frank said. "Compton's was written for computers in a pyramid style as with newspapers, with main facts up front, then more depth." *Id.*

38. U.S. Pat. No. 5,241,671.

39. Pobuda, *supra* note 12, at 1. Filing the patent application and publicly using the claimed invention simultaneously prevents the applicant from losing the patent rights

employed the newly developed proprietary software that was claimed in the patent application.⁴⁰ The inventors filed forty-one claims and twenty-three drawings describing their invention.⁴¹ The inventors also assigned all potential patent rights on the claimed invention to Encyclopedia Britannica, with Compton's having a joint interest assignment.⁴² Multimedia developers were unaware that Compton's sought a patent on the software employed in its multimedia encyclopedia until the patent issued almost four years after the inventors filed for the patent.⁴³ During the initial patentability examination, the PTO reviewed forty-one prior art references cited against the forty-one claims filed in the patent application.⁴⁴ After the examination was completed, the PTO issued the '671 patent on August 31, 1993.⁴⁵

C. THE CLAIMED INVENTION

Of the forty-one claims that were filed in the '671 patent application, four were independent while the remaining thirty-seven were dependent.⁴⁶ During the examination, the specification, prosecution history,

based on a violation of the §102(b) statutory bar. 35 U.S.C. § 102(b) (1993). Filing the patent application freezes the time clock under §102 so that what happens after filing is not material to the determination of novelty or non-obviousness over the prior art. *Id.* The cutoff date may be earlier, at the time of invention, but it is no later than the filing date. *Id.* Section 102(b) gives the applicant a one-year grace period prior to the date of the patent application in the United States to publicly use or offer for sale the invention in this county; thus, if the applicant files the patent application and uses the invention in public simultaneously, it will prevent the loss of right to a patent because the public use is within the one-year grace period given under 35 U.S.C. § 102(b). *Id.*

40. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News; see U.S. Pat. No. 5,241,671 describing the patented device as:

[A] database search system that retrieves multimedia information in a flexible, user friendly system. The search system uses a multimedia database consisting of text, pictures, audio and animated data. That database is searched through multiple graphical and textual entry paths. These entry paths include an idea search, a title finder search, a topic tree search, a picture explorer search, a history time line search, a world atlas search, a researcher's assistant search, and a feature articles search.

U.S. Patent No. 5,241,671.

41. U.S. Pat. No. 5,241,671; see also *infra* APPENDIX: THE '671 PATENT CLAIMS [hereinafter APPENDIX].

42. U.S. Pat. No. 5,241,671 (showing that the assignee-at-issue was Encyclopedia Britannica and the transaction was recorded on October 12, 1993, indicating that Compton's has a joint interest).

43. See *id.* (showing that applicants filed their application on October 16, 1989, and the patent issued on August 21, 1993).

44. *Id.*

45. *Id.*

46. *Id.* An independent claim is "[a] claim that contains a complete description of the subject matter, without reference to an other claim." ROBERT C. FABER, *LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING* 542 (3rd ed. 1990). A dependent claim is "[a] claim

prior art, and other claims are analyzed to interpret the meaning of particular words or phrases within a claim.⁴⁷ Moreover, the PTO examiners, when conducting a patentability examination, must interpret the words and phrases in a claim broadly.⁴⁸

The '671 patent claims a search system where a single multimedia database interfaces with textual and graphical entry paths.⁴⁹ Compton's patent covers virtually all combinations of text, video and graphics that employ a similar search function.⁵⁰ The '671 patent issued on August 31, 1993,⁵¹ giving Compton's patent rights on the claimed invention for seventeen years and making the expiration date August 31, 2010.⁵²

D. THE PRIOR ART REFERENCES

The PTO examiners reviewed the claimed invention in light of the prior art to determine patentability.⁵³ Prior art exists in a variety of forms. Prior art references comprise everything within public knowledge, "including what would be obvious from it, at a given time, to a per-

which refers back to and further restricts (i.e., makes more narrow) a single preceding claim (the parent claim), which may itself be a dependent claim." *Id.* at 537.

47. BRANTLEY, *supra* note 7, §1.01; see *Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 1566 (Fed. Cir. 1992) (stating that "[i]n defining the meaning of key terms in a claim, reference may be had to the specification, the prosecution history, prior art, and other claims") (citing *Tandon Corp. v. Int'l Trade Comm'n*, 831 F.2d 1017, 1021, (Fed. Cir. 1987)); *Lindemann Maschinenfabrik v. American Hoist & Derrick*, 730 F.2d 1452, 1458 (Fed. Cir. 1984) (stating "[i]n deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference") (citing *SSIH Equip. S.A. v. USITC*, 718 F.2d 365 (Fed. Cir. 1983)).

48. BRANTLEY, *supra* note 7, §1.01; see *Atlantic Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 846 (Fed. Cir. 1992) (permitting "the PTO to give claims their broadest reasonable meaning when determining patentability").

49. U.S. Pat. No. 5,241,671.

50. Pobuda, *supra* note 12, at 1; Tanya Pobuda, *Compton's Suffers Setback As Patent Is Re-examined*, COMPUTER DEALER NEWS, Jan. 26, 1994, at 2.

51. U.S. Pat. No. 5,241,671.

52. *Compton's Awarded Patent on Multimedia*, *supra* note 28, at 7.

53. Prior art references are defined in the following manner:

The prior art constitutes those references which may be used to determine the novelty and non-obviousness of claimed subject matter in a patent application or patent. It includes both documentary sources (patents and publications from anywhere in the world) and non-documentary sources (things known, used or invented in the United States). A reference must be in the art pertinent to the invention in question or in an analogous art. A reference must be dated prior to the applicant's date of invention or, in the case of statutory bars, more than one year prior to [the applicant's] date of application for a patent.

1 CHISUM, *supra* note 3, at G1-18; see *Ex parte Raychem Corp.*, 25 U.S.P.Q.2d 1265, 1270 (Bd. Pat. App. & Int'f. 1992) (stating that "all disclosures in a [prior art] reference must be considered including those which are non-preferred").

son of ordinary skill in the art,"⁵⁴ and also include patent applications pending in the PTO. Prior art references thus demonstrate what is known by someone skilled in the relevant art.⁵⁵ All relevant prior art references are cited against the claimed invention regardless of whether the applicant had knowledge of the prior art reference.⁵⁶ Once the relevant prior art reference is discovered, it is analyzed to determine whether it anticipated or made obvious the claimed invention.⁵⁷ The claimed invention is examined against the teaching and disclosure of the prior art reference.⁵⁸ Scrutinizing the claimed invention in this manner helps prevent the PTO from rewarding applicants for an invention already in the public domain.⁵⁹ Thus, prior art references are analyzed to determine whether the applicant has truly created a new invention.

However, during a reexamination proceeding, prior art references are limited to patents and printed publications that are submitted to the PTO by the person requesting reexamination.⁶⁰ In addition, that person must explain to the PTO how the submitted prior art references raise a

54. PETER D. ROSENBERG, *PATENT LAW FUNDAMENTALS* §7.01 (2nd ed. 1994); BRANTLEY, *supra* note 7, at 11.

55. *Id.* See also *In re Fritch*, 972 F.2d 1260, 1264, (Fed. Cir. 1992) (stating that "a prior art reference is relevant for all that it teaches to those of ordinary skill in the art").

56. See *In re Carlson*, 983 F.2d 1032, 1038 (Fed. Cir. 1992) (stating that "[t]o determine patentability, a hypothetical person is presumed to know all the pertinent prior art, whether or not the applicant is actually aware of its existence"); *In re Gorman*, 933 F.2d 982, 986 (Fed. Cir. 1991) (stating that "[w]hen the references are all in the same analogous fields, knowledge thereof by the hypothetical person of ordinary skill is presumed").

57. See *Gorman*, 933 F.2d at 986 (stating that "the test is whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention"); *Raychem Corp.*, 25 U.S.P.Q.2d at 1422 (stating that "[a] prior art reference must be considered in its entirety, including non-preferred embodiments").

58. HARMON, *supra* note 8, at 112. "What the prior art taught or suggested, or what knowledge is available, is a factual determination. A reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing or (in the case of a patent) attempting to protect." *Id.* (internal citations omitted).

59. See *infra* notes 65-86 and accompanying text for an explanation of the two tests employed by the PTO to determine patentability.

60. HARMON, *supra* note 8, at 601 (stating "[r]eexamination will be limited to documentary art—patents and printed publications—except where the patentee admits that certain activities such as use or sale are part of the prior art"); see also 37 C.F.R. § 1.501 (1993), which states:

(a) At any time during the period of enforceability of a patent, any person may cite to the Patent and Trademark Office in writing prior art consisting of patents or printed publications which that person states to be pertinent and applicable to the patent and believes to have a bearing on the patentability of any claim of a particular patent.

substantial new question of patentability of the patented invention.⁶¹ The PTO examiners will examine the teachings and disclosures of the newly submitted prior art references and determine whether a reexamination proceeding should continue.⁶² If it is determined that there is a substantial new question of patentability in the patented invention, the patent is reexamined in accordance with the same procedures employed by the PTO in its initial patentability examination.

In Compton's case, forty-one prior art references were cited and reviewed against the '671 patent during its initial examination for patentability.⁶³ In light of the prior art references, the PTO issued the '671 patent believing that the claimed invention was novel and non-obvious from the prior art references. However, shortly thereafter, the '671 patent underwent further scrutiny in a reexamination proceeding where an additional thirteen prior art references were cited and reviewed against the claims granted in the '671 patent.⁶⁴

E. THE TESTS EMPLOYED BY THE PTO TO DETERMINE PATENTABILITY

When the PTO examines a patent application, it must determine whether the claimed invention is novel and non-obvious, pursuant to 35 U.S.C. §§ 102 and 103, in light of the prior art references. The same two tests are applied in a reexamination proceeding,⁶⁵ but the PTO examines the claimed invention with respect to any newly submitted prior art references.⁶⁶ However, the newly submitted prior art references are limited only to patents and printed publications.⁶⁷

61. See 37 C.F.R. § 1.510(b)(1) (indicating that a request for reexamination must include a "statement pointing out each substantial new question of patentability based on prior patents and printed publications").

62. 37 C.F.R. § 1.525; see also HARMON, *supra* note 8, at 605, which states:

The statute gives third-party requestors no further, specific right to participate in the reexamination proceeding [after citing prior art references and explaining their relevancy of why a substantial new question of patentability is raised in the patented invention]; indeed, it specifically prohibits further participation by third-party requestors during reexamination. Thus, a reexamination is conducted *ex parte* after it is instituted.

63. U.S. Pat. No. 5,241,671.

64. William A. Tannenbaum, *Current Multimedia Patent, Copyrights, Work Made For Hire, and Rights Acquisition Issues*, 383 PLI/Pat 95 (March/April 1994).

65. 1 CHISUM, *supra* note 3, at G1-10. A re-examination proceeding is defined *supra*, at note 20.

66. See *In re Etter*, 756 F.2d 852, 856 (Fed. Cir. 1985). "Patent claims are reexamined only in light of patents or printed publications under 35 U.S.C. §§ 102 and 103, and only new or amended claims are examined under 35 U.S.C. §§ 112 and 132." *Id.* "[O]nce reexamination is ordered (an unreviewable decision), the patent holder 'starts over' under the PTO view on all § 102 and § 103 issues with respect to all claims, amended or unamended, whether or not related to the new question." *Id.* at 863 (Nies, J. concurring).

67. 37 C.F.R. § 1.552.

1. Section 102 of the Patent Act: The Novelty Test

The test of novelty is defined in the Patent Act under section 102(a), (b), (e), and (g).⁶⁸ However, there are seven subsections of section 102 and each subsection adds an additional requirement that must be met in order for the applicant to be entitled to a patent for the claimed invention.⁶⁹ If the claimed invention fails to meet any one of the subsections enumerated in section 102, the applicant cannot receive a patent on the claimed invention.⁷⁰ Most importantly, the claimed invention is not anticipated under section 102 of the Patent Act unless a single prior art reference contains every element comprising the claimed invention.⁷¹

The test set forth in section 102 requires that prior to the applicant's discovery of the claimed invention, no one must know of the invention in the United States and the invention must not be disclosed in a patent or described in a printed publication in any country.⁷² The claimed invention also cannot be publicly used⁷³ or be on sale⁷⁴ in the United States for more than a year before the date which the applicant filed the patent application in the United States.⁷⁵ Moreover, the claimed invention can-

68. 35 U.S.C. § 102.

69. *Id.*

70. *Id.* See also *In re Marshall*, 578 F.2d 301, 304 (C.C.P.A. 1978) (stating that "[r]ejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art").

71. *Structural Rubber Prod. Co. v. Park Rubber Co.*, 749 F.2d 707, 715 (Fed. Cir. 1984) (stating that "the defense of lack of novelty (i.e., 'anticipation') can only be established by a single prior art reference which discloses each and every element of the claimed invention"); *Lindemann Maschinenfabrik*, 730 F.2d at 1458 (stating that "[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim").

72. 35 U.S.C. § 102(a) states that a "person shall be entitled to a patent unless—the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent." See also *Reeves Bros. v. United States Laminating Corp.*, 282 F. Supp. 118, 136 (E.D.N.Y. 1968) (stating "[n]o place in the Patent Act or elsewhere did Congress indicate that only certain types or classes of patents may be considered under § 102(a) and (b), and it did not distinguish between one particular type of foreign patent and another"); *Nat'l Tractor Pullers Ass'n v. Watkins*, 205 U.S.P.Q. (BNA) 892 (N.D. Ill 1980) (stating "[t]he knowledge required by §102(a) involves some type of public disclosure and is not satisfied by knowledge of a single person, or a few persons working together").

73. See *Nat'l Research Dev. Corp.*, 822 F. Supp. at 1129 (stating "[i]t does not take much to trigger the 'public use' statutory bar to a patent"); *Egbert v. Lippmann*, 104 U.S. 333 (1881) (stating "to constitute the public use of an invention it is not necessary that more than one of the patented articles should be publicly used. Rather one well-defined case of such user is just as effectual to annul the patent as many").

74. See David W. Carsten & Cray Allen Nard, *Conception and the "On Sale" Bar*, 34 WM. & MARY L. REV. 393 (1993) (proposing a framework by which on-sale events should be analyzed); William C. Rooklidge, *Application of the On-Sale Bar to Activities Performed Before Reduction to Practice*, 72 J. PAT. & TRADEMARK OFF. SOC'Y 543 (1990).

75. 35 U.S.C. § 102(b) states:

not be patented or be the subject of an inventor's certificate in any foreign country for more than twelve months prior to the time the applicant filed the application in the United States.⁷⁶

In addition, the claimed invention lacks novelty if it is described in another United States patent that was filed before the applicant invented the claimed invention.⁷⁷ Further, the claimed invention lacks novelty if another inventor in the United States both made the claimed invention before the applicant made it and did not abandon, suppress, or conceal the claimed invention.⁷⁸

A person shall be entitled to a patent unless—the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

See *Manville Sales Corp. v. Paramount Systems*, 917 F.2d 544 (Fed. Cir. 1990) (describing the "experimental use exception"); *UMC Electronics Co. v. United States*, 816 F.2d 647 (Fed. Cir. 1987) (describing the meaning of reduction to practice); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261 (Fed. Cir. 1986) (describing a public use); *FMC Corp. v. Hennessy Industries*, 650 F. Supp. 688 (N.D. Ill. 1986) (describing the meaning of "on-sale"); *King Instruments Corp. v. Otari Corp.*, 767 F.2d 853 (Fed. Cir. 1985) (describing the meaning of reduction to practice); *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983) (describing a public use); *General Electric Co. v. United States*, 654 F.2d 55 (Ct. Cl. 1981) (describing third-party statutory bar activity).

76. 35 U.S.C. § 102(d) states:

A person shall be entitled to a patent unless the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant of his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.

See In re Kathawala, 9 F.3d 942, 945 (Fed. Cir. 1993) (stating "[w]hen a foreign patent issues with claims directed to the same invention as the U.S. application, the invention is 'patented' within the meaning of section 102(d); validity of the foreign claims is irrelevant to the § 102(d) inquiry").

77. 35 U.S.C. § 102(e) states:

A person shall be entitled to a patent unless the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

See In re Bartfeld, 925 F.2d 1450, 1451 n.4 (Fed. Cir. 1991) (stating that "[t]hrough not anticipatory, a reference that would otherwise qualify as prior art under 35 U.S.C. § 102(e) may form the basis of an obviousness rejection under 35 U.S.C. § 103; hence, '§ 102(e)/103' rejections. The effective date of the § 102(e) reference is the application filing date, not the patent issuance date").

78. 35 U.S.C. § 102(g) states:

A person shall be entitled to a patent unless before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

The applicant, however, can secure patent rights on the claimed invention in one of two ways: (1) the applicant must be the first to conceive the claimed invention and the first to reduce the claimed invention to practice; or, (2) the applicant must be the first to conceive the claimed invention and must be diligent in reducing the claimed invention to practice, from a time before the first one who reduced the claimed invention to practice conceived the claimed invention.⁷⁹

2. Section 103 of the Patent Act: The Non-obviousness Test

Even if a single prior art reference does not contain every element of the claimed invention or if all subsections of section 102 are met, the claimed invention may still be unpatentable under the non-obviousness test.⁸⁰ The claimed invention is not patentable under section 103 if it is

See Texas Instruments Inc. v. U.S. Int'l Trade Comm'n, 988 F.2d 1165 (Fed. Cir. 1993) (stating that "[a] patent may be invalid as anticipated due to the prior conception and reduction to practice by another of the patentee's invention"); *New Idea Farm Equip. Corp. v. Sperry Corp.*, 916 F.2d 1561, 1566 (Fed. Cir. 1990) (stating that "New Idea argued in its motion for a directed verdict and in its motion for JNOV that the prior invention of another cannot be used to invalidate a patent in an infringement action. While more commonly applied to interferences, § 102(g) is indeed applicable to prior invention situations other than in the context of an interference"); *Paulik v. Rizkalla*, 760 F.2d 1270, 1272 (Fed. Cir. 1985) (stating that "Paulik's four-year delay between reduction to practice and his filing date was prima facie suppression or concealment under the first clause of section 102(g), that since Paulik had reduced the invention to practice in 1971 and 1972 he was barred by the second clause of section 102(g) from providing reasonable diligence leading to his 1975 filing, and that in any event the intervening activities were insufficient to excuse the delay").

79. *See* 35 U.S.C. § 102(g); *see also* *DSL Dynamic Sciences Ltd. v. Union Switch & Signal, Inc.*, 928 F.2d 1122, 1126 (Fed. Cir. 1991) (stating "there is certainly no requirement that an invention, when tested, be in a commercial [sic] satisfactory stage of development in order to reduce the invention to practice"); *Griffith v. Kanamaru*, 816 F.2d 624, 626 (Fed. Cir. 1987) (stating "[t]he reasonable diligence standard balances the interest in rewarding and encouraging invention with the public's interest in the earliest possible disclosure of innovation. . . . Griffith must account for the entire period from just before Kanamaru's filing date until his reduction to practice"); *Gould v. Schawlow*, 363 F.2d 908, 921 (Fed. Cir. 1966) (stating that "Gould had failed to provide sufficient evidence to discharge his burden of proving reasonable diligence in reducing the invention to practice").

80. The non-obviousness test as defined by 35 U.S.C. § 103 (1993) reads:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. Subject matter developed by another person, which qualifies as prior art only under section (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time of the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

taught or disclosed in one of the following ways: The claimed invention is taught by combining two or more prior art references together; the claimed invention is obvious in light of a prior art reference; or the claimed invention is obvious in light of combining two or more prior art references together.⁸¹

In order to establish that the claimed invention is not obvious, the differences in the claimed invention, in light of the prior art references, must appear unique to someone skilled in the relevant art.⁸² This determination is made by looking at the point in time when the applicant invented the claimed invention.⁸³ Most importantly, the claimed invention is viewed as a whole.⁸⁴

Further, when determining non-obviousness, the manner in which the claimed invention was conceived and reduced to practice is irrelevant (i.e., accidental or intentional).⁸⁵ Thus, a patent may be granted even if the claimed invention was accidentally created.⁸⁶

F. THE INITIATION OF THE REEXAMINATION PROCEEDINGS

In 1993, the Tribune Publishing Company ("Tribune")⁸⁷ of Chicago, Illinois, purchased Compton's.⁸⁸ As a subsidiary of the Tribune, Compton's announced at the Comdex/Fall 1993 trade show in Las Vegas, Nevada, that it had acquired a patent for a multimedia search system.⁸⁹ Compton's also announced a royalty and licensing fee structure for independent multimedia developers, and an affiliate program for third-party developers.⁹⁰ Compton's further announced that it did not intend

81. *Id.* § 103.

82. *See id.*

83. The author uses the term "invention" as the conception combined with reduction to practice (actual or constructive).

84. *See* 35 U.S.C. § 103.

85. *Id.*

86. *Id.*

87. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. The Tribune Publishing Co. is a Chicago-based corporation in the information and entertainment industry. *Id.* "Tribune publishes six daily newspapers, operates seven television and six radio stations, produces and syndicates information and programming, publishes books and information in print and digital formats, and has an ownership interest in one of Canada's largest newsprint manufacturers." *Id.*

88. *Compton's Awarded Patent on Multimedia*, *supra* note 28, at 7; Tanya Pobuda, *Compton's Stands Ground on Patent*, *COMPUTER DEALER NEWS*, Dec. 27, 1993, at 9.

89. Pobuda, *supra* note 12, at 1; Tanya Pobuda, *Patent Re-examination Denies Compton's Claim*, *COMPUTER DEALER NEWS*, April 20, 1994, at 1; *PTO, Reexamination*, 49 *PTCJ* at 56; *PTO, Reexamination*, 47 *PTCJ* at 485.

90. Pobuda, *supra* note 50, at 2.

Shortly after announcing the patent at Comdex, Compton's moved quickly to take advantage of the patent, drawing up a royalty and licensing fee structure that claimed up to three per cent of the sales of independent multimedia developers.

to limit its patent to the precise invention contained in the '671 patent specification.⁹¹ However, Compton's can only enforce the claims granted in the '671 patent.

Multimedia developers were outraged after hearing Compton's announcements and complained about the validity of the claims granted in the '671 patent.⁹² Multimedia developers claimed that the subject mat-

Compton's had also set up affiliates program allowing third-party developers to sign on Compton [sic] as their exclusive distributor.

Developers who chose not to join Compton's affiliate program were to be forced to pay one per cent of net cash receipts for any title sold after Aug. 31, 1993. Starting July 1, 1994, the royalty fee was to be hiked to three per cent of net cash receipts for any title sold after that date.

Id. Compton's offered multimedia developers at least four options. "[1], entering into a strategic joint venture relationship with Compton; [2], entering into a distribution arrangement with Compton; [3], developing a product using Compton SmartRetrieve technology; or [4] complying with a royalty structure as set forth by Compton." *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. "We simply want the public to recognize Compton's NewMedia as the pioneer in this industry, promote a standard that can be used by every developer, and be compensated for the investments we have made to make multimedia a reality for developers and end users." *Id.* (quoting President and Chief Executive Officer of Compton's NewMedia, Stanley Frank).

91. *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News. "There is no intention, therefore, of limiting this invention to the exact abstract or disclosure presented herein. More particularly it is contemplated that this invention can be used with any information that can be stored in a database." *Id.* See also *Compton's Awarded Patent on Multimedia*, *supra* note 28, at 7 (stating that "[t]he patent claims explicitly do not limit the invention to any particular computer platform, database technology, storage medium (although cd-rom is cited as a pertinent example) or information content"); *CD-ROM Publisher Claims Rights to Advanced Multimedia Retrieval Technology*, *COMPUTERWORLD*, Nov. 22, 1994, at 28 (hereinafter *CD-ROM Publisher*).

92. "That will never fly, it will never fly," added another multimedia exhibitor. "It will never stand up legally." Pobuda, *supra* note 12, at 1. "It is like saying you have a copyright for the idea of a book," said one multimedia titles developer." *Id.* "It is really like saying that when Ford came out with his Model-T vehicle, he should have been granted a patent on the steering wheel. . . . The analogy is there," stated another multimedia developer." Pobuda, *supra* note 50, at 2. "It is possible that the people making these patent decisions don't have an adequate understanding on how computer software works. . . . This algorithm (used in Computer's multimedia search functions) has been in the public domain for a number of years," said Christopher Blythe, principal and senior associate at Toronto-based consultancy 2iC, . . . adding he found it curious that Compton did nothing before the patent to protect it." *Id.* "Nonsense," said Nick Arnett, president of Multimedia Computing Corp. in Campbell, Calif. "They're acting like they invented the multimedia industry, which is ludicrous." *CD-ROM Publisher*, *supra* note 91, at 28. "Patenting multimedia is like patenting the English language," said Robert Carberry, president of Fireworks Partners, an IBM affiliate in Somer, N.Y." Clair Whitmer, *Compton's Multimedia Patent, Licensing Plan Worry Developers*, *INFOWORLD*, Nov. 29, 1993, at 14. "It's shameful you would even apply for such a patent—shameful, shameful," said Thomas Lansky from Munich Production Partners in Germany." *CD-ROM Publisher*, *supra* note 91, at 28.

ter of the '671 patent was either unpatentable or already in the public domain for more than thirty years.⁹³

On December 14, 1993, Commissioner Lehman responded to the multitude of complaints from multimedia developers by requesting reexamination of the '671 patent.⁹⁴ The PTO issued a press release stating that it was reexamining the claims granted in the '671 patent because of new information submitted to the PTO which challenged the validity of the '671 patent.⁹⁵

In January 1994, contrary to standard policy and procedures, the PTO accepted any third-party information in regards to the reexamination proceeding.⁹⁶ As a result, numerous prior art references were cited against the '671 patent—three United States patent documents,⁹⁷ one foreign patent document,⁹⁸ and nine other printed publications.⁹⁹

The PTO examined the '671 patent in light of the newly submitted prior art references. After PTO examiners completed the examination, then Acting Assistant Commissioner for Patents, Stephen G. Kunin ("Assistant Commissioner Kunin") wrote a decision stating that the teachings of the newly submitted prior art references raised a substantial new question of patentability as to all forty-one claims granted in the '671 patent.¹⁰⁰

93. *PTO, Reexamination*, 47 PTCJ at 485; *Patents, Reexamination*, 47 PTCJ at 177.

94. *PTO, Reexamination*, 49 PTCJ at 56; see also HARMON, *supra* note 8, at 601.

The reexamination procedure was added to the patent law at the end of 1980 (citing 35 U.S.C. §§ 301-307). It provides a means whereby a patentee, or any member of the public, may ascertain whether a substantial new question of patentability can be raised against an issued patent on the basis of documentary prior art—patents and printed publication. Reexamination establishes a mechanism for enabling the PTO to review and correct on initial examination.

Id.

95. Pobuda, *supra* note 50, at 2.

96. *PTO, Reexamination*, 49 PTCJ at 56; *New Evidence Forces Reexamination of Compton's Patent*, NEWSBYTES NEWS NETWORK, available on Lexis, Feb. 11, 1994.

97. See Tannenbaum, *supra* note 64.

98. *Id.*

99. *Id.*

100. *Id.* The procedure for requesting a reexamination is as follows:

(a) If a substantial new question of patentability is found pursuant to § 1.515 or § 1.520, the determination will include an order for reexamination of the patent for resolution of the question. If the order for reexamination resulted from a petition pursuant to §1.515(c), the reexamination will ordinary be conducted by an examiner other than the examiner responsible for the initial determination under § 1.515(a).

(b) If the order for reexamination of the patent mailed to the patent owner at the address as provided for in § 1.33(c) is returned to the Office undelivered, the notice published in the Official Gazette under § 1.11(c) will be considered to be constructive notice and reexamination will proceed.

37 C.F.R. § 1.525 (1995).

III. PTO'S ANALYSIS

The PTO addressed the issue of whether the forty-one claims filed in the '671 patent application were novel and non-obvious to someone skilled in the relevant art. The PTO surprisingly allowed a large number of third-party participants from the general public to submit any relevant prior art references.¹⁰¹ After all the prior art references were submitted, the PTO had to determine whether the new prior art references affected the validity of the forty-one claims granted in the '671 patent.

The PTO's examination led to the conclusion that Compton's claimed invention was disclosed or taught in the prior art references.¹⁰² The PTO determined that each of the forty-one claims in the '671 patent "read on" at least one of the newly considered prior art references.¹⁰³ As a result, on March 23, 1994, PTO examiner Archie Williams ("Williams") sent Compton's attorney of record Jon Grossman ("Grossman") of Dickstein, Shapiro & Morin in Washington, D.C. the first Office Action that initially canceled all forty-one claims granted in the '671 patent.¹⁰⁴ On May 23, 1994, Williams sent Grossman the additional prior art references cited against the '671 patent.¹⁰⁵ On May 24, 1994, Grossman requested a one month extension of time to respond to the first Office Action.¹⁰⁶ Grossman responded to the first Office Action by filing a fifty-two page response on June 23, 1994, in an effort to clarify any ambiguity in the forty-one claims granted in the '671 patent.¹⁰⁷ The response eliminated one of the original forty-one claims and added six additional claims

101. Linda Rohrbough, *Compton's Fight—Patent Office Reverses on Prior Art*, NEWSBYTES NEWS NETWORK, available on Lexis, Feb. 11, 1994.

102. *PTO, Reexamination*, 47 PTCJ at 485.

103. Tannenbaum, *supra* note 64; *PTO, Reexamination*, 47 PTCJ at 485.

104. Telephone interview with Jon Grossman of Dickstein, Shapiro & Morin, Attorney of Record for Compton's (Sept. 12, 1995) [hereinafter *Grossman Interview*].

105. *Id.*

106. *Id.*

107. *Id.* See also *Compton's NewMedia is Fighting to Assert Its CD Rom Patent*, DATA STORAGE REPORT, July 1994, at 1 (hereinafter *Compton's NewMedia is Fighting*).

which were narrower in scope.¹⁰⁸ However, these added claims were subsequently cancelled by the PTO as well.¹⁰⁹

The PTO finally canceled the claims as amended on October 26, 1994.¹¹⁰ On November 9, 1994, the PTO issued a press release stating that it had formally canceled all forty-one claims granted in the '671 patent.¹¹¹ Grossman had two months to file a notice of appeal for Compton's.¹¹²

Grossman filed the notice of appeal on behalf of Compton's on December 22, 1994.¹¹³ On January 23, 1995, Grossman requested a one month extension of time to file Compton's appeal brief.¹¹⁴ The extension of time was subsequently granted on March 21, 1995.¹¹⁵ On April 23, 1995, Grossman filed Compton's appeal brief and currently awaits examiner Williams' answer.¹¹⁶

108. *Id.* See 37 C.F.R. § 1.530(d) (stating that "[n]o amendment may change the scope of the claims of the patent or introduce new matter"); see also 37 C.F.R. § 1.552(b) (stating that "[a]mended or new claims presented during a reexamination proceeding must not enlarge the scope of the claims of the patent and will be examined on the basis of patents or printed publications and also for compliance with the requirements of 35 U.S.C. § 112 and the new matter prohibition of 35 U.S.C. § 132"); Deborah Cole, *Smoke Clears After Compton's Bomb: Developers Downplay Effects of Broad Patent*, MACWEEK, Nov. 29, 1993, at 38 (stating that "the patent's 41 claims and subclaims are narrower than they originally thought. . . . It requires a menu of certain ways to start the search—some with text, some graphics. And you must be able to switch back and forth between interrelated text and graphics. If you don't have that, you don't infringe," stated Robert Barr, a patent attorney with Palo Alto, Calif. office of Brobeck, Phleger and Harrison"); HARMON, *supra* note 8, at 604 (stating "[i]n reexamination . . . the applicant will have the opportunity to amend the claims").

109. *PTO, Reexamination*, 49 PTCJ at 56.

110. *Id.* at 56; *Grossman Interview*, *supra* note 104.

111. *Id.*

112. *Id.*

113. *Grossman Interview*, *supra* note 104. The Patent Act describes the procedures required to file a notice of appeal in the following manner:

An applicant dissatisfied with the decision in an appeal to the Board of Patent Appeal and Interferences under section 134 of this title may appeal the decision to the United States Court of Appeals for the Federal Circuit. By filing such an appeal the applicant waives his or her right to proceed under Section 145 of this title. A party to an interference dissatisfied with the decision of the Board of Patent Appeals and Interferences may appeal the decision to the United States Court of Appeals for the Federal Circuit, but such appeal shall be dismissed if any adverse party to such interference, within twenty days after the appellant has filed notice of appeal in accordance with section 142 of this title, files notice with the Commissioner that the party elects to have all further proceedings conducted as provided in section 146 of this title. If the appellant does not, within thirty days after the filing of such notice by the adverse party, file a civil action under section 146, the decision appealed from shall govern the further proceedings in the case.

35 U.S.C. § 141.

114. *Grossman Interview*, *supra* note 104.

115. *Id.*

116. *Id.*

IV. AUTHOR'S ANALYSIS

A. INTRODUCTION

The inventors of the '671 patent conformed with the Patent Act when they filed the patent application on their claimed invention.¹¹⁷ After initially examining the patent application against numerous prior art references, the PTO found that the claims filed were valid and issued the '671 patent.¹¹⁸ A few months after the issuance of the '671 patent and only one month after Compton's announced its patent rights with respect to the '671 patent at the Comdex/Fall 1993 trade show in Las Vegas, Nevada, the '671 patent was criticized and eventually canceled by the same governmental agency that issued it.¹¹⁹

This section addresses how the procedures employed by the PTO to reexamine and cancel the claims granted in the '671 patent were inappropriate. This Comment addresses procedural and substantive issues in the following manner: Section B addresses the effects of the '671 patent on the multimedia industry to demonstrate the impact of the patent on multimedia developers. Section C addresses the errors made by the PTO to determine whether Commissioner Lehman's request for reexamination unfairly disadvantaged Compton's. Section D analyzes the combination of known principles to establish novelty and non-obviousness of the '671 patent to determine whether the complaining multimedia developers had a legitimate concern about the PTO issuing the '671 patent. Finally, section E proposes a solution to prevent any beliefs or concerns of impropriety from reoccurring in the future.

B. THE EFFECTS OF THE '671 PATENT ON THE MULTIMEDIA INDUSTRY

The inventors of '671 patent neither did anything wrong nor did anything "out of the ordinary" when they decided to file their patent application. The reason behind granting a patent and giving the inventor patent rights to exclude others from using, making and selling the patented invention is to encourage technological development.¹²⁰ If an inventor creates new and useful technology, that inventor should be rewarded.

Compton's crisis embodies such a scenario. The inventors purportedly created a new way to convey information through the use of multimedia.¹²¹ Before the issuance of the '671 patent, these inventors

117. 35 U.S.C. § 112.

118. U.S. Pat. No. 5,241,671.

119. *Id.* Pobuda, *supra* note 50, at 2 (announcing patent rights at Comdex trade show); *Patent, Reexamination*, 47 PTCJ at 177 (requesting reexamination); *PTO, Reexamination*, 49 PTCJ at 56 (rejecting the '671 patent).

120. 35 U.S.C. § 154.

121. *See generally* U.S. Pat. No. 5,241,671.

immediately assigned all their patent rights with respect to the '671 patent to Encyclopedia Britannica, which owned the publishing rights to Compton's Encyclopedia at the time.¹²²

After issuance of the '671 patent, Compton's exercised its patent rights and expanded the uses of multimedia by targeting various mediums of distribution, such as bookstores, record stores, mass merchandisers, and consumer electronic retailers; Compton's led other multimedia developers in "experimenting with multimedia rental via video stores and availability for lending in public libraries."¹²³ This vast array of distribution was unique because it opened up channels beyond those of the customary computer specialty and software-only stores.¹²⁴ Thus, it is likely that multimedia developers who are complaining about the validity of the '671 patent and its many uses are attempting to avoid paying Compton's royalties and licensing fees; if the '671 patent is held valid, multimedia developers will be required to pay millions of dollars to Compton's for royalties and licensing fees.¹²⁵

Moreover, contrary to many beliefs among the complaining multimedia developers, the '671 patent will not deter developments in the multimedia industry.¹²⁶ The idea of stabilizing the multimedia industry has no merit because the argument can be asserted against all patents. For example, every patent gives an inventor rights to exclude others

122. *Id.*

123. *Compton's Awarded Patent on Multimedia*, *supra* note 28, at 7; *Compton's NewMedia Receives Patent*, *supra* note 10, at Financial News (stating that Compton's provided CD-ROM titles to Major Video Concept in January 1993, to public libraries in August 1993, and to Blockbuster in November 1993).

124. *Compton's Awarded Patent on Multimedia*, *supra* note 28, at 7.

125. Pobuda, *supra* note 50, at 2.

126. John Dvorak & Paul Somerson, *Will Prudes and Patents Stop the Multimedia Juggernaut?*, PC COMPUTING, Feb. 1994, at 108. "Do they [Compton's] want to stop the multimedia craze dead in its tracks? If nobody else can do it then what is going to drive the market and keep the disk drive prices falling? Who is going to push the technology?" *Id.* In fact, the '671 patent may encourage development because other multimedia developers will create innovative ways to get around the '671 patent to avoid paying royalty or licensing fees to Compton's. *Id.* "In a document issued by Compton's, the company tried to quell developers' fears, stating: 'While granted patent rights described in the patent, Compton's wants to continue to foster the growth of this industry, and will license developers the use of the multimedia invention as defined in the Compton's patent.'" Pobuda, *supra* note 12, at 1; see also Seybold, *supra* note 18, at 21. Seybold supports Compton's reasoning as follows:

Compton's does not intend to try to stop anyone from producing interactive titles. It just wants to use the patent to encourage everyone to do business with Compton's — or, failing this, to pay Compton's a "modest" royalty on everything they do. Compton's will grant licenses to any company that: Forms an alliance with Compton's, . . . [s]igns up to let Compton's be exclusive distributor of its interactive titles, . . . [or] licenses Compton's SmarTrieve developer's tool kit.

Id.

from using, making and selling the patented invention.¹²⁷ Therefore, should every patent be reexamined and canceled? Compton's acquiring patent rights to an invention that became widely used while the patent application was in the PTO for nearly four years does not justify the PTO's cancellation of the claims granted in the '671 patent. The '671 patent appeared both novel and non-obvious when the patent application was filed in 1989. Therefore, Compton's should be neither penalized nor denied patent rights because of the delay and shortcomings of the PTO.

C. THE ERRORS MADE BY THE PTO

The PTO's control over *ex parte* proceedings is governed by the rules and regulations of the Patent Act.¹²⁸ However, in Compton's case, even though the PTO did not exceed its scope of authority as defined in the Patent Act, the PTO did not conduct the request for reexamination with respect to the '671 patent in the customary manner.

The procedure by which the reexamination of the '671 patent was requested is disturbing. The Patent Act gives anyone, including the Commissioner of Patents and Trademarks, the authority to request reexamination against an issued patent; however, this power is rarely used by the Commissioner.¹²⁹ The use of such power by the Commissioner places undue pressure on the PTO examiners. The complaining multimedia developers that questioned the validity of the '671 patent should have requested reexamination, not Commissioner Lehman. Thus, Commissioner Lehman's request for reexamination may have unfairly disadvantaged Compton's.

As a result of Commissioner Lehman's request for reexamination, the PTO examiners may have been biased against the claims granted in the '671 patent. Commissioner Lehman's request for reexamination may have been improperly influenced by multimedia developers who could have requested the reexamination proceeding themselves. The PTO examiners may have perceived the personal biases or doubts of Commissioner Lehman, intended or not, which may have influenced the PTO examiners to cancel the claims granted in the '671 patent.

D. THE COMBINATION OF KNOWN PRINCIPLES

As of October 1989, the combination of various search functions in the '671 patent was neither disclosed nor taught in the prior art refer-

127. 35 U.S.C. § 154.

128. *Id.* at §§ 1-376; see also Rules of Practice in Patent Cases, 37 C.F.R. §§ 1.1-1.809.

129. See *supra* note 19 (citing case law which indicates that even though the Commissioner has the authority to request reexamination, such authority is rarely exercised); 37 C.F.R. § 1.510.

ences.¹³⁰ Combining the independent search functions taught in the numerous prior art references is now obvious; however, combining those same independent search functions does not appear to have been obvious in October 1989.¹³¹ It is likely that the complaining multimedia developers and Commissioner Lehman improperly relied on hindsight to cancel the claims granted in the '671 patent. Until Compton's released its multimedia encyclopedia in October 1989, multimedia developers had neither created nor employed a concept that gave the user an option to search through textual and graphical databases simultaneously or independently.¹³² Thus, the PTO cannot merely examine the prior art refer-

130. See Tannenbaum, *supra* note 64 (showing that the various search functions were disclosed and taught independently in numerous prior art references, but combining the independent search functions together was not disclosed or taught); see also *In re Gal*, 980 F.2d 717, 719 (Fed. Cir. 1992) (stating "[t]he Board stated that the 'comprehensive teachings of Matsumura effectively overshadow the distinctions sought to be drawn by Gal utilizing terminology for the two types of cells in the claims'"); *In re Jones*, 958 F.2d 347, 351 (Fed. Cir. 1992) (holding that "[b]efore the PTO may combine the disclosures of two or more prior art references in order to establish prima facie obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art").

The subject matter that must have been obvious, in order to deny patentability under § 103, is the entirety of the claimed invention, a concept Congress nailed down with the statutory phrase 'as a whole.' It is error to hold that the differences must be unobvious. The focus is not merely the differences between the claimed invention and the prior art, but on the claimed subject matter as a whole.

HARMON, *supra* note 8, at 113-14.

131. See Tannenbaum, *supra* note 64 (relying on the reexamination order which listed nine prior art references and analyzed its respective search functions to create and cancel the claims granted in the '671 patent).

A reference must be considered for all that it taught — disclosures that diverge and teach away from the invention at hand as well as disclosures that point towards and teach the invention. It is improper to take statements in the prior art wholly out of context and give them meaning they would not have had to one skilled in the art having no knowledge of the claimed invention, or to anyone else who can read the prior art with understanding. It is impermissible within the framework of § 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.

HARMON, *supra* note 8, at 112-13; see also *Compton's NewMedia is Fighting*, *supra* note 107, at 1 (responding to the rejection of the claims granted in the '671 patent, "one of the central arguments . . . is . . . during the reexamination of the original patent claims, the PTO acted with 'improper hindsight' by combing individual pieces of prior art in a way that would not have been obvious at the time of the original patent application"); *Texas Instruments*, 988 F.2d at 1178 (stating that "the prior art references in combination do not suggest the invention as a whole claimed in the . . . patent").

132. Seybold, *supra* note 18 at 21.

Compton's argument is the assertion that until the introduction of Compton's Multimedia Encyclopedia in October 1989, no one created an interactive title that allowed users to navigate through a fully linked text and graphics database. It contends that the then-existing "state of the art" included engines for text search

ences by themselves to determine obviousness of the claimed invention; rather, the PTO must examine the prior art references in light of such secondary considerations that will affect the outcome of whether the claimed invention was obvious.¹³³

Moreover, there is no indication that the prior art references taught someone skilled in the relevant art to make the necessary modifications to create the claimed invention filed in the '671 patent.¹³⁴ Thus, the '671 patent differs from other multimedia inventions because it allows the user to examine textual and graphical databases that are reciprocally related, yet searched independently.¹³⁵

The substance of the complaining multimedia developers' argument appears to be that the independent search functions taught in separate prior art references and employed in the '671 patent were previously known and used in the industry.¹³⁶ Thus, their argument centers around lack of novelty and non-obviousness because the principles behind the '671 patent were previously known. However, the unique combination of numerous prior art references in a single body constitutes the novelty and non-obviousness of Compton's claimed invention.¹³⁷

The '671 patent is comprised of search functions that are taught or disclosed in separate prior art references, but this alone does not bar patentability of the claimed invention.¹³⁸ The majority, if not all, of patented inventions utilize known principles and manipulate information to

or navigation through hyper-linked text databases and/or navigation through separate graphic databases, not navigation through an integrated database of text and graphics information with the ability to move freely between the media.

Id. Few would deny that Compton's Multimedia Encyclopedia was a significant breakthrough in the development of the multimedia industry. *Id.* According to Compton's, the multimedia technology in October 1989 consisted of separate searches in the text database or the graphics database; the text and graphics databases were never interrelated to allow exploration between both databases. *Id.*

133. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966) (stating "such secondary considerations as commercial success, long felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origins of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquires may have relevancy").

134. *See In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (stating "the PTO erred in rejecting applicants' claims as prima facie obvious; the prior art did not suggest the combination or convey to those of ordinary skill in the art a reasonable expectation of success of making it").

135. *Patent Pyrotechnics: CD-Rom Publisher Claims Rights to Advanced Multimedia Retrieval Technology*, *COMPUTERWORLD*, Nov. 22, 1994, at 28.

136. *Compton's Awarded Patent on Multimedia*, *supra* note 28 at 7.

137. *See Arlan Levitan, Patently Absurd: Compton's Claims Looks and Feels Silly*, *COMPUTER SHOPPER*, Feb. 1994, at 63.

138. *Id.*

create a patentable invention.¹³⁹ Moreover, there is no provision in the Patent Act that sets forth a different standard of patentability for inventions comprising known principles from inventions that do not utilize such combinations.¹⁴⁰ The Court of Appeals for the Federal Circuit¹⁴¹ only makes a distinction between inventions that combine known principles in a different manner which perform a different function and inventions that combine known principles but do not change the function of the principles that were taught in the prior art references.¹⁴² Compton's claimed invention suggests the former. Further, a selected combination of known principles whose results are functional to a particular need forms the basis of a patentable invention.¹⁴³

139. BRANTLEY, *supra* note 7, at 10; see *Lindemann Maschinenfabrik*, 730 F.2d at 1462 (noting "the claimed invention may employ known principles does not in itself establish that the invention would have been obvious. Most inventions do").

[T]hat all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is however, simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. A court must consider what the prior art as a whole would have suggested to one skilled in the art."

HARMON, *supra* note 8, at 118.

140. BRANTLEY, *supra* note 7, at 10; see *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961 (Fed. Cir. 1983) (stating "[i]t is moreover simplistically unrealistic to employ a separate test of patentability for combinations of old elements when the language of the 1952 Patent Act provides no basis for either classifying patents into different 'types' or for applying different treatment to different 'types' of patents"); see also HARMON, *supra* note 8, at 118 (stating "[t]he conditions for patentability of combination inventions are the same as those for other inventions").

141. The Court of Appeals for the Federal Circuit was created and delegated powers in the following manner:

The C.A.F.C. was created on October 1, 1982 by the merger of two existing Article III courts—the Court of Claims and the Court of Customs and Patent Appeals. The C.A.F.C. has exclusive appellate jurisdiction over most cases involving patent issues, including (1) decisions by the Board of Appeals of the Patent and Trademark Office; (2) decisions by District Courts in infringement and other patent suits; (3) decisions by the United States Claims Court (including reasonable compensation suits against the United States for use of a patent invention); and (4) determinations of the United States International Trade Commission.

1 CHISUM, *supra* note 3, at G1-5.

142. ROSENBERG, *supra* note 54, at 9-52; see *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934 (Fed. Cir. 1990) (stating "[i]t is insufficient that the prior art disclosed the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made by the inventor").

143. ROSENBERG, *supra* note 54, at 9-44; see also *Raytheon Co.*, 724 F.2d at 961 (stating "as a rule of law applicable broadly to patent cases because virtually every claimed invention is a combination of old elements"); HARMON, *supra* note 8, at 118 (stating that "any assertion that a combination of old elements can never rise to the level of patentable invention is incorrect because § 103 requires the invention to be considered as a whole"). A combination may be patentable whether it is composed of elements all new, partly new, or all

Thus, if combinations of old elements were prohibited, then the purpose of the Patent Act would be thwarted because inventors would have no incentive to create new inventions.¹⁴⁴ People could mirror another inventor's creative efforts instead of developing or improving an existing invention. The fact that a combination of known principles are brought together to achieve a desired result promotes the purpose of the Patent Act which is to enhance technology in a new and useful manner.¹⁴⁵

E. A PROPOSED SOLUTION

If the validity of any patent is questionable, based on prior art references not considered when the patent issued, then the patent should be reexamined. However, even though the Patent Act allows any person to request a reexamination proceeding,¹⁴⁶ the Commissioner of Patents and Trademarks should be limited in requesting such proceedings. The Commissioner's powers should be limited because the Commissioner is an authoritative figure in the PTO who exercises great influence and control over PTO examiners. Thus, with respect to reexaminations, the Commissioner should be limited to merely correcting errors within the PTO. The Commissioner should not be allowed to request reexamination purely for the benefit of one group over another or if the concern is merely monetary among developers; only a third-party should be able to request reexamination in most instances.

Moreover, this limitation on the power of the Commissioner is necessary to avoid undue pressure on the PTO examiners. If the Commissioner requests reexamination, it may imply that the Commissioner believes that the patent is invalid. The PTO examiners may then unintentionally become prejudiced against the patent when reexamining the patent because their superior has requested the reexamination proceeding and believes that the patent is invalid. Thus, in order to prevent any concerns of impropriety from reoccurring, the Commissioner's powers should be limited when requesting reexamination proceedings.

V. CONCLUSION

The PTO neither employed the appropriate procedure nor reached the correct result when reexamining the claims granted in the '671 patent. The procedure by which the PTO canceled the claims granted in the '671 patent is disturbing. Commissioner Lehman's request for reexamination was "out of the ordinary" and problematic because undue pres-

old. *Id.* (citing *Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540 (Fed. Cir. 1984)).

144. See *supra* notes 1 and 2 (quoting U.S. CONST. art. I, §8, cl. 8 and 35 U.S.C. §101).

145. See *supra* note 143.

146. 35 U.S.C. § 302; 37 C.F.R. § 1.510.

sure may have been placed on the PTO examiners to cancel the claims granted in the '671 patent. Merely because Commissioner Lehman, and not a third-party, requested the reexamination proceeding, doubts of the validity of the '671 patent may have been conveyed to the PTO examiners, regardless of whether this was an accurate depiction of Commissioner Lehman's beliefs.

Moreover, on its face, the claims granted in the '671 patent are patentable even though the principles that comprise the '671 patent are individually known in the prior art references. The Patent Act does not bar unique combinations of known principles.¹⁴⁷ The controversy among multimedia developers appears to have pressured Commissioner Lehman into requesting reexamination against the '671 patent. The complaining multimedia developers may have erroneously believed that the combination of known principles in the '671 patent was obvious in light of the numerous prior art references. However, if such a combination was obvious in light of the prior art references, the combination would have been employed by multimedia developers long before Compton's released its multimedia encyclopedia.¹⁴⁸ Hindsight is inappropriate when determining patentability. Anything and everything is obvious to someone skilled in the art, once they have been shown or told how to achieve the desired result. Thus, Compton's should be rewarded, not penalized, for its innovative efforts to create proprietary software that combined valuable principles in a unique manner.

TERRI SUZETTE HUGHES

147. HARMON, *supra* note 8, at 118.

148. *Compton's NewsMedia Receives Patent*, *supra* note 10, at Financial News (stating that "Compton's Multimedia Encyclopedia [was] the first electronic encyclopedia to integrate pictures, sound, motion and multiple entry paths").

APPENDIX: THE '671 PATENT CLAIMS

There were forty-one claims in the '671 patent. They are as follows:

1. A computer search system for retrieving information, comprising: means for storing interrelated textual information and graphical information; means for interrelating said textual and graphical information; a plurality of entry path means for searching said stored interrelated textual and graphical information, said entry path means comprising: textual search entry path means for searching said textual information and for retrieving interrelated graphical information to said searched text; graphics entry path means for searching said graphical information and for retrieving interrelated textual information to said searched graphical information; selecting means for providing a menu of said plurality of entry path means for selection; processing means for executing inquiries provided by a user in order to search said textual and graphical information through said selected entry path means; indicating means for indicating a pathway that accesses information related in one of said entry path means to information accessible in another one of said entry path means; accessing means of providing access to said related information in said another entry path means; and output means for receiving search results from said processing means and said related information from said accessing means and for providing said search results and received information to such user.

2. The search system according to claim 1, wherein said textual information comprise words, phrases, numbers and letters stored in said at least one database.

3. The search system according to claim 1, wherein said graphical information include maps, charts, pictures, and moving images.

4. The search system according to claim 1, where one of said graphical and textual information comprises audio information.

5. The search system according to claim 1, wherein said graphical and textual information are stored on a CD-ROM disc.

6. The search system according to claim 1, further comprising a micro-computer for executing operations of said search system, and for storing said graphical and textual information.

7. The search system according to claim 1, wherein said graphical entry path means comprises interactively narrowing a search of graphical images to a point indicated by said indicating means which provides a path to said related textual information that is accessible through said accessing means.

8. The search system according to claim 7, wherein said indicating means in said textual entry path means indicates a path to related graphical information that is accessible by said accessing means.

9. The search system according to claim 1, wherein said textual entry path means and said graphical entry path means include assisting means for assisting a user in searching said graphical and textual information.

10. The search system according to claim 1, wherein said textual search entry path means comprises idea entry path means having a searching means for searching said plurality of types of information for terms and phrases that closely resemble a search inquiry.

11. The search system according to claim 10, wherein said idea entry path means eliminates stop words by comparing terms in said inquiry to terms stored in a stop term list and eliminating any search inquiry terms that match words stored in said stop term list.

12. The search system according to claim 10, wherein said idea entry path means operates on phrases consisting substantially of two or more entered terms.

13. The search system according to claim 10, wherein said idea entry path means includes spelling means for checking the spelling of said search inquiry and provides alternate versions of misspelled words to user.

14. The search system according to claim 10, wherein said idea entry path means includes new list function means which compares said search inquiry with a thesaurus contained in one of said plurality of databases to provide alternate non-ambiguous terms for said search inquiry.

15. The search system according to claim 14, wherein if more than one alternate non-ambiguous term is retrieved by said list function means, then said new list function means orders said alternatives in order of relevance to said ambiguous terms.

16. The search system according to claim 10, wherein said search system includes a plurality of databases which include stems which are referenced through a stem index where each stem is identified with all related stems in said stem index, and are related to units of said textual and graphical information, said stem terms being concatenated in order to map each stem to other stems and to units to textual information which express a similar idea.

17. The search system according to claim 16, wherein said concatenation comprises linking said stems together based on grammatical linkage and based on thesaurus linkages.

18. The search system according to claim 10, wherein said textual search path entry means further comprises ranking means for ordering said textual information in order of relevance to said search inquiry inputs.

19. The search system according to claim 18, wherein said ranking means bases said ordering on an exhaustively coefficient for said inputted search inquiry terms or phrases and an exclusivity coefficient for said inputted search inquiry terms or phrases.

20. The search system according to claim 19, wherein all of said textual information ranked above a predetermined exhaustively and exclusivity threshold is separately designated.

21. The search system according to claim 10, wherein said textual information comprises articles from an encyclopedia.

22. The search system according to claim 1, wherein a portion of said graphical and textual information comprises an encyclopedia.

23. The search system according to claim 1, wherein a portion of said graphical and textual information comprises a dictionary.

24. The search system according to claim 1, wherein a portion of said graphical and textual information comprises a thesaurus.

25. The search system according to claim 1, wherein a portion of said textual and graphical information comprises audio information.

26. The search system according to claim 1, wherein a portion of said graphical information comprises photographs, maps, charts, graphs, drawings and animation.

27. The search system according to claim 1, wherein said textual entry path means comprises title finder entry path means for locating titles, wherein said titles are searched by said title finder entry path means by moving through an alphabetical list of titles related to said textual information.

28. The search system according to claim 1, wherein said textual search entry path means comprises a topic tree entry path means for dividing said textual information into topics and sub-topics in order to assist in browsing through said textual information.

29. The search system according to claim 1, wherein said graphics search entry path means comprising picture explorer entry path means for locating at least one picture and for employing said accessing means to retrieve said textual information related to said at least one picture.

30. The search system according to claim 29, wherein said picture explorer entry path means further comprises picture tour search path means for presenting pictures in random order.

31. The search system according to claim 29, wherein said picture explorer entry path means includes picture finder entry path means which searches picture captions based upon said search inquiry inputs.

32. The search system according to claim 1, wherein one of said textual entry path means comprises history timeline entry path means for displaying events arranged on a timeline in order that a user may select information about one of said events by activating said event on a display.

33. The search system according to claim 32, wherein said information about an event includes audio information.

34. The search system according to claim 1, wherein one said entry path means comprises an atlas entry path means for enabling a search of a plurality of maps of an atlas through said processing means which enables the placement of a marker on a location on said atlas which such that said atlas entry path means draws a corresponding map around said specific place.

35. The search system according to claim 34, wherein said atlas entry path means provides substantially multiple levels of increasing detail for any part of said atlas.

36. The search system according to claim 34, wherein said indicating means provides an indication of textual information related to a place labeled on said atlas which can be accessed through said accessing means.

37. The search system according to claim 1, wherein said entry path means further comprises a feature articles entry path means which take a user directly to at least one article in said computer search system.

38. The search system according to claim 1, wherein one of said entry path means comprises a researcher's assistant entry path which contains subject matter categories divided into topics and said topics are further divided into research assignments and wherein said research assignments are ordered by level of difficulty.

39. A computer search system for retrieving information, comprising: means for storing interrelated textual information and graphical information; means for interrelating said textual and graphical information; a plurality of entry path means for searching said stored interrelated textual and graphical information, said entry path means comprising: textual search entry path means for searching said textual information and for retrieving interrelated graphical information to said searched text; graphics entry path means for searching said graphical information and for retrieving interrelated textual information to said searched graphical information; title finder entry path means for assisting a user in uncovering titles stored in said stored textual information; selecting means for providing a menu of said plurality of entry path means for selection; processing means for executing inquiries provided by a user in order to search said textual and graphical information through said selected entry path means; indicating means for indicating a pathway that accesses information related in one of said entry path means to information accessible in another one of said entry path means; accessing means for providing access to said related information in said entry path means; and output means for retrieving search results from said processing means and said related information from said accessing means and for providing said search results and received information to such user.

40. A computer search system for retrieving information, comprising: means for storing interrelated textual information and graphical information; means for interrelating said textual and graphical information; a plurality of entry path means for searching said stored interrelated textual and graphical information, said entry path means comprising: textual search entry path means for searching said textual information and for retrieving interrelated graphical information to said searched text; graphics entry path means for searching said graphical information and for retrieving interrelated textual information to said searched graphical information; atlas entry path means for enabling a user to search maps of an atlas that are specified by such user in order that said atlas entry path means retrieves a map related to such user's inquiry; selecting means for providing a menu of said plural-

ity of entry path means for selection; processing means for executing inquiries provided by a user in order to search said textual and graphical information through said selected entry path means; indicating means for indicating a pathway that accesses information related in one of said entry path means to information accessible in another one of said entry path means; accessing means for providing access to said related information in said entry path means; and output means for retrieving search results from said processing means and said related information from said accessing means and for providing said search results and received information to such user.

41. A computer search system for retrieving information, comprising: means for storing interrelated textual information and graphical information; means for interrelating said textual and graphical information; a plurality of entry path means for searching said stored interrelated textual and graphical information, said entry path means comprising: idea search entry path means for searching said textual information; title finder entry path means for assisting a user in uncovering titles stored in said stored textual information; topic tree entry path means for associating said textual information with topics and subtopics in order to assist such user in searching said textual information; picture explorer entry path means for enabling the user to find at least one picture from said stored graphical information and to retrieve interrelated textual information related to said at least one picture; timeline entry path means enabling the user to search a timeline in order that such user may select said textual information about one of a plurality of events represented by said timeline by activating said one event; atlas entry path means for enabling the user to search maps of an atlas that are specified by such user in order that said atlas entry path means draws a corresponding map around a specified location; feature articles entry path means which takes such user directly to at least one article in said search system; and researcher's assistant entry path means which has subject matter categories divided into topics which are further divided into research assignments ordered by level of difficulty; selecting means for providing a menu of said plurality of entry path means for selection; processing means for executing inquiries provided by a user in order to search said textual and graphical information through said selected entry path means; indicating means for indicating a pathway that accesses information related in one of said entry path means to information accessible in another one of said entry path means; accessing means for providing access to said related information in said entry path means; and output means for retrieving search results from said processing means and said related information from said accessing means and for providing said search results and received information to such user.

See U.S. Pat. No. 5,241,671.

