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UNITED STATES DISTRICT COURT  
DISTRICT OF NEVADA

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SYMBOL TECHNOLOGIES, INC., et al., )

Plaintiffs, )

v. )

LEMELSON MEDICAL, EDUCATION  
& RESEARCH FOUNDATION,  
LIMITED PARTNERSHIP, )

Defendant. )

CV-S-01-701-PMP (RJJ)  
(Base File)

COGNEX CORPORATION, )

Plaintiff, )

v. )

LEMELSON MEDICAL, EDUCATION  
& RESEARCH FOUNDATION,  
LIMITED PARTNERSHIP, )

Defendant. )

CV-S-01-702-PMP (RJJ)

TELXON CORPORATION, )

Plaintiff, )

v. )

LEMELSON MEDICAL, EDUCATION  
& RESEARCH FOUNDATION,  
LIMITED PARTNERSHIP, )

Defendant. )

CV-S-01-703-PMP (RJJ)

FINDINGS OF FACT AND CONCLUSIONS OF LAW

1 This action commenced with the filing of separate Complaints by Symbol  
2 Technologies, Inc., Accu-sort Systems, Inc., Intermec Technologies Corp., Metrologic  
3 Instruments, Inc., PSC Inc., Teklogix Corp. and Zebra Technologies Corp. (collectively  
4 "Symbol") and Cognex Corp. ("Cognex"), for declaratory judgment pursuant to 28 U.S.C.  
5 § 2201(a) (1994), against Lemelson Medical, Education & Research Foundation, Limited  
6 Partnership ("Lemelson"). The Complaints filed on behalf of Symbol and Cognex sought a  
7 judgment that fourteen patents-in-suit<sup>1</sup> are invalid, unenforceable, and not infringed by  
8 Symbol or Cognex, or their customers. These two cases were consolidated on March 21,  
9 2000 (#44).

10 Following extensive pretrial proceedings and an interlocutory appeal to the  
11 United States Court of Appeals for the Federal Circuit, these consolidated actions  
12 proceeded to a bench trial conducted from November 18, 2002, through January 17, 2003,  
13 followed by five and one-half months of post-trial briefing which concluded on June 30,  
14 2003.

### 15 BACKGROUND

16 Lemelson claims to be the assignee of approximately 185 unexpired patents and  
17 many pending patent applications of the late Jerome H. Lemelson. The patents-in-suit  
18 generally involve machine vision and automatic identification bar code technology which  
19 Lemelson maintains are entitled to the benefit of the filing date of two Lemelson patent  
20 applications filed in 1954 and 1956.

21 Plaintiffs Symbol and Cognex design, manufacture and sell bar code scanners  
22 and machine vision products, respectively. In and prior to 1998, customers of Symbol and  
23 Cognex began receiving letters from Lemelson stating that the use of Symbol and Cognex  
24 products infringed various Lemelson patents. Symbol and Cognex claim that they will be

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25  
26 <sup>1</sup> The patents-in-suit are U.S. Patents No. 4,338,626; 4,511,918; 4,969,038; 4,979,029; 4,984,073;  
5,023,714; 5,067,012; 5,119,190; 5,119,205; 5,128,753; 5,144,421; 5,249,045; 5,283,641; and 5,351,078.

1 forced to indemnify their customers should any of the Lemelson patents be found to be  
2 infringed. As a result, Symbol and Cognex filed this action seeking a declaration that uses  
3 of their bar code scanners and machine vision systems and products do not infringe the  
4 Lemelson patents-in-suit. Symbol and Cognex also seek judgment that the patents-in-suit  
5 are invalid under 35 U.S.C. § 101 for lack of utility; 35 U.S.C. § 102 for anticipation; 35  
6 U.S.C. § 103 for obviousness; 35 U.S.C. § 112 for failure to comply with the written  
7 description, enablement and definiteness requirements; and for double patenting.  
8 Additionally, Symbol and Cognex seek judgment that the patents-in-suit are unenforceable  
9 for prosecution laches, and due to Lemelson's inequitable conduct in securing the patents-  
10 in-suit from the U.S. Patent and Trademark Office.

11 Lemelson has counterclaimed for declarations that Symbol and Cognex infringed  
12 the patents-in-suit by contributory infringement and inducing infringement. Lemelson does  
13 not seek infringement damages from Symbol or Cognex by reason of their sale of goods to  
14 third parties, but Lemelson has filed infringement actions against various third parties or has  
15 reserved the right to do so. Additionally, Lemelson requests that the Court award attorneys'  
16 fees and costs under the "exceptional case" provisions of 32 U.S.C. § 285.

17 Based upon the evidence adduced at trial, the Admitted Facts<sup>2</sup> set forth in the  
18

19 <sup>2</sup> The following facts are admitted by the parties in the Joint Pretrial Order (#355):

20 1. Symbol Technologies, Inc., ("Symbol") is a corporation organized and existing under the laws of the State of  
21 Delaware and maintains a place of business in Holtsville, New York.

22 2. Cognex Corporation ("Cognex") is a corporation organized and existing under the laws of the Commonwealth  
23 of Massachusetts and maintains its principal place of business in Natick, Massachusetts.

24 3. Defendant Lemelson Medical, Education and Research Foundation, Limited Partnership ("LMERF"), is a  
25 limited partnership organized and existing under the laws of the State of Nevada.

26 4. Jerome Lemelson caused LMERF to be formed in or about September 1993. Jerome Lemelson was the sole  
general partner of LMERF until his death on October 1, 1997.

5. LMERF is engaged in the business of enforcing and licensing patents issued to Mr. Lemelson.

6. Jerome H. Lemelson is the sole named inventor of the fourteen patents-in-suit.

7. U.S. App. Ser. No. 477,467, which was filed in 1954 ("the 1954 application"), was the original application.  
It did not claim priority under § 120 to any other application.

8. Mr. Lemelson abandoned the 1954 application in 1964; it did not issue as a patent.

9. The 1956 application was an original application. Upon filing, it did not claim priority under § 120 to any other  
application.

1  
2 10. The 1956 application issued as U.S. Patent No. 3,081,379 ("the '379 patent") on March 12, 1963. The '379 patent had seventeen claims and expired on March 12, 1980.

3 11. Mr. Lemelson asserted that the 1963 application was a CIP of both U.S. Application Ser. No. 626,211, which was filed in 1956 ("the 1956 application"), and the 1954 application.

4 12. The 1963 application repeated all figures and nearly all text of the 1956 application.

5 13. Mr. Lemelson filed U.S. Application Ser. No. 254,710 on May 18, 1972 ("the 1972 application"), which issued as U.S. Patent No. 4,118,730 on November 3, 1978.

6 14. All patents-in-suit contain an identical specification (the "common specification"), excluding the abstract and the claims, to that of the 1972 application.

7 15. The 1972 application was a "continuation-in-part" application ("CIP") of United States Application Ser. No. 267,377, which was filed in 1963 ("the 1963 application").

8 16. The 1972 application repeated nearly all of the 118 pages of text and all twenty-eight figures of the 1963 application.

9 17. Twenty-three of the twenty-eight figures and more than fifty-one of the sixty-five columns of text in the common specification of the patents-in-suit are repeated from the 1956 application.

10 18. U.S. Application Ser. No. 778,331 was filed on March 16, 1977 ("the 1977 application"). This application referenced the 1972, 1963, 1956, and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,148,061 on April 3, 1979.

11 19. U.S. Application Ser. No. 13,608 was filed on February 16, 1979 ("the 1979 application"). This application referenced the 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,338,626 on July 6, 1982.

12 20. U.S. Application Ser. No. 394,946 was filed on July 2, 1982 ("the 1982 application"). This application referenced the 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,511,918 on April 16, 1985.

13 21. U.S. Application Ser. No. 723,183 was filed on April 15, 1985 ("the 1985 application"). This application referenced the 1982, 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,660,086 on April 21, 1987.

14 22. U.S. Application Ser. No. 906,969 was filed on September 15, 1986 ("the 1986 application"). This application referenced the 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,984,073 on January 8, 1991.

15 23. U.S. Application Ser. No. 411,402 was filed on September 22, 1989. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,969,038 on November 6, 1990.

16 24. U.S. Application Ser. No. 426,080 was filed on October 24, 1989. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 5,119,190 on June 2, 1992.

17 25. U.S. Application Ser. No. 453,789 was filed on December 20, 1989. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 411,402 (see above) by serial number and filing date and issued as U.S. Pat. No. 5,128,753 on July 7, 1992.

18 26. U.S. Application Ser. No. 500,287 was filed on March 27, 1990. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 5,067,012 on November 19, 1991.

19 27. U.S. Application Ser. No. 500,288 was filed on March 27, 1990. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications by serial number and filing date and issued as U.S. Pat. No. 4,979,029 on December 18, 1990.

20 28. U.S. Application Ser. No. 571,764 was filed on August 22, 1990. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 500,287 (see above) by serial number and filing date and issued as U.S. Pat. No. 5,023,714 on June 11, 1991.

21 29. U.S. Application Ser. No. 609,917 was filed on November 5, 1990. This application referenced the 1986, 1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 411,402 (see above) by serial number and filing date and issued as U.S. Pat. No. 5,119,205 on June 2, 1992.

1 Joint Pretrial Order (#355), and the arguments presented in the post-trial briefs, the Court  
2 hereby makes the following Findings of Fact and Conclusions of Law:

3  
4 **I. JURISDICTION**

5 The Court has jurisdiction over this action pursuant to the Declaratory Judgment  
6 Act, 28 U.S.C. § 2201, and the Patent Statute, 28 U.S.C. §§ 1331 and 1338(a).

7  
8 **II. THE PATENTS AND CLAIMS IN SUIT**

9 In Festo v. Shoketsu, 535 U.S. 722, 730-31 (2002), the Supreme Court stated:

10 The patent laws “promote the progress of Science and Useful Arts” by  
11 rewarding innovation with a temporary monopoly. U.S.C.A. Const.,  
12 Art. I, § 8, cl. 8. The monopoly is a property right; and like any  
13 property right, it’s boundary should be clear. This clarity is essential to  
14 promote progress, because it enables efficient investment in  
15 innovation. A patent holder should know what he owns, and the public  
16 should know what he does not.

17 In 1954 and 1956, Jerome Lemelson filed two lengthy patent applications in the  
18 United States Patent Office that purported to describe specific methods and apparatus for  
19 performing the inspection and measurement of objects. The 1954 application was  
20 abandoned, but a successor to that application issued in 1969 as Lemelson’s ‘481 patent,  
21 which expired in 1986. The 1956 application issued in 1963 as Lemelson’s ‘379 patent,

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22 30. U.S. Application Ser No. 826,617 was filed on January 28, 1992. This application referenced the 1986, 1985,  
23 1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 426,080 (see above) by serial number and filing date  
24 and issued as U.S. Pat. No. 5,249,045 on September 28, 1993.

25 31. U.S. Application Ser No. 872,344 was filed on April 23, 1992. This application referenced the 1986, 1985,  
26 1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 453,789 (see above) by serial number and filing date  
and issued as U.S. Pat. No. 5,144,421 on September 1, 1992.

32. U.S. Application Ser No. 78,681 was filed on June 16, 1993. This application referenced the 1986, 1985,  
1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 426,080 and 826,617 (see above) by serial number and  
filing date and issued as U.S. Pat. No. 5,283,641 on February 1, 1994.

33. U.S. Application Ser No. 122,888 was filed on September 16, 1993. This application referenced the 1986,  
1985, 1979, 1977, 1972, 1963, 1956 and 1954 applications and Ser. No. 426,080, 826, 617 and 078,681 (see above) by  
serial number and filing date and issued as U.S. Pat. No. 5,351,078 on September 27, 1994.

34. Mr. Lemelson’s U.S. Patent No. 4,653,109 (“the ‘109 patent”), entitled “Image Analysis System and Meth od,”  
is not related to the patents-in-suit. It issued in 1987 on an application filed in 1984.

1 and expired in 1980. However, in 1963, before the '379 patent issued, Lemelson filed a  
2 "continuation-in-part" (CIP) application which added additional drawings and text to the  
3 1956 application. In 1972, Lemelson filed another CIP application which added more text  
4 and which thereafter formed the specification of an additional sixteen patent applications  
5 filed by Lemelson between 1977 and 1993. These constitute the "common specification"  
6 relevant to this case.

7 The abstract contained in Lemelson's '029 patent-in-suit filed March 27, 1990,<sup>3</sup>  
8 provides the following general description of the common specification of the patents-in-  
9 suit:

10 An automatic **scanning** apparatus and method for detecting the  
11 presence of one or more objects in an image field under investigation  
12 or inspection. Electra-optical scanning means, such as a television  
13 camera, is employed to scan an image field and generate output  
14 electrical signals which vary in accordance with variations in the  
15 optical characteristics of the matter and objects in the image field  
16 scanned. Such signals are computer processed and analyzed to  
17 generate coded electrical signals which define optical characteristics of  
18 portion of the image field scanned, such as objects or the images of  
19 objects scanned, their shape, color of a combination of color and shape.  
20 Electronic means is provided to generate further coded electrical  
21 signals which indicate the presence of one or more objects in the image  
22 field scanned and may be used to effect intelligent indications thereof,  
23 to control one or more devices such as a motor or motors, and/or to  
24 provide information for computational purposes to be processed and  
25 utilized by a computer. In one form, the shape of an object or objects  
26 is detected and coded signals generated are employed to effect a  
comparison of such shape with information relating to the shapes of  
known objects to identify the object or objects scanned. In another  
form, the color or surface characteristics of an object is detected and  
resulting signals indicative thereof are compared with information  
derived from a memory to identify either the object or its color or  
surface characteristics. In a third form both shape and color are  
detected and compared with recorded information for identification  
purposes.

Thirteen of the patents-in-suit contained an identical specification to that of the  
1972 application—"the common specification." The '190 patent contains additional material

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<sup>3</sup> See Exhibit 17A attached hereto.

1 not found in the other patents. Not surprisingly, the evidence offered by Symbol and  
2 Cognex regarding the disclosure of the common specification and the structure, operation  
3 and use of the accused products varies widely from the scope of the disclosure advanced by  
4 Lemelson.

5 First, Symbol and Cognex argue that the seventy-six asserted claims are  
6 unenforceable due to prosecution laches. Even if they are not, Symbol and Cognex  
7 maintain that the asserted claims are not infringed, that they are invalid due to lack of  
8 written description, that they are invalid because they are not enabled, that they are  
9 unenforceable due to inequitable conduct on the part of Lemelson, and that the '626 and  
10 '918 patent claims are invalid based on anticipatory prior art. Lemelson responds that the  
11 evidence calls for rejection of the allegations made by Symbol and Cognex and insists that  
12 Lemelson must be deemed the pioneer in the machine vision and bar code fields whose  
13 inventions have been infringed by Symbol, Cognex and many others.

### 14 15 **III. PROSECUTION LATCHES**

16 Symbol and Cognex contend that to the extent Lemelson made and disclosed any  
17 innovations in his 1954 or 1956 patent applications, his delay of from 18 to 39 years in  
18 filing the applications that issued as the patents-in-suit requires that Lemelson's right to  
19 those claims be deemed forfeited under the equitable doctrine of prosecution laches.  
20 Indeed, Symbol and Cognex maintain that during the intervening decades after Lemelson's  
21 1954 and 1956 filings, the technology Lemelson now tries to cover had already been  
22 exploited by Symbol and Cognex and other members of the public within the machine  
23 vision and bar code industries who had never heard of Lemelson or his patents.

24 The defense of prosecution laches was first recognized in the patent context  
25 nearly 150 years ago in Kendall v. Winsor, 62 U.S. 322 (1858). In Kendall, the Supreme  
26 Court held that a person "may forfeit his rights as an inventor by a willful or negligent

1 postponement of his claims, or by an attempt to withhold the benefit of his improvement  
2 from the public until a similar or the same improvement should have been made and  
3 introduced to others.” Id. at 329.

4 Sixty-five years later, in Woodbridge v. United States, 263 U.S. 50 (1923), and  
5 Webster Electric Co. v. Splittorf Electrical Co., 264 U.S. 463 (1924), the Supreme Court  
6 applied the defense of prosecution laches to prevent the applicant from deliberately  
7 delaying the issuance of a patent solely to increase its commercial value, and to prevent a  
8 patent applicant from unreasonably postponing the time when the public could enjoy the  
9 free use of an invention.

10 In Symbol Technologies, Inc. v. Lemelson Medical, Education and Research  
11 Foundation, 277 F.3d 1361, 1363 (Fed. Cir. 2002), the Federal Circuit held in this case that  
12 the doctrine of prosecution laches “. . . may be applied to bar enforcement of patent claims  
13 that issued after an unreasonable and unexplained delay in prosecution even though the  
14 applicant complied with pertinent statutes and rules.” See also In re: Bogese II, 303 F.3d  
15 1362, 1367 (Fed. Cir. 2002). This Court concurs with the holdings of other district courts  
16 considering the defense of prosecution laches, that the holder of a valid patent may  
17 nonetheless be barred from enforcing it if there was an unreasonable and unexplained delay  
18 in prosecuting the patent claim, and the alleged infringer has suffered prejudice as a result.  
19 See Cummins-Allison Corp. v. Glory Ltd., 2003 WL 355470 (N.D. Ill. 2003); Chiron Corp.  
20 v. Genentech, Inc., 2002 WL 32123928, (E.D. Cal. 2002) and A.C. Aukerman Co. v. R.L.  
21 Chaides Constr. Co., 960 F.2d 1020 (Fed. Cir. 1992).

22 As an equitable doctrine based on the unreasonableness of the delay in  
23 prosecuting a patent application, prosecution laches must necessarily be evaluated on a  
24 case-by-case basis. The fact that the patent office ultimately issued patents to Lemelson  
25 cannot foreclose the inquiry regarding the application of prosecution laches nor can the  
26 overall pendency and presentation of the asserted claims be ignored in assessing whether



1 the delay in this case was unreasonable.<sup>4</sup>

2 The Court rejects Lemelson's post-trial argument that the recent Supreme Court  
3 decision in Eldrid v. Ashcroft, 537 U.S. 186 (2003), provides that delay in securing asserted  
4 claims "does not contravene the Constitution," as removing the prosecution laches issue  
5 from the table. Eldrid held that the statutory extension of the existing copyright term does  
6 not exceed the power of Congress under the Constitution. The question before the Court  
7 here, however, is not whether Congress can modify the statutory term of a patent, but  
8 whether an individual patent applicant can do so unilaterally.

9 Applying the foregoing standard to the preponderance of the evidence adduced at  
10 trial, the Court finds that Lemelson's 18 to 39 year delay in filing and prosecuting the  
11 asserted claims under the fourteen patents-in-suit after they were first purportedly disclosed  
12 in the 1954 and 1956 applications was unreasonable and unjustified and that the doctrine of  
13 prosecution laches renders the asserted claims unenforceable against Symbol and Cognex.

14 The first patent based on Lemelson's 1954 application issued in 1962, and the  
15 first patent based on Lemelson's 1956 application issued in 1963. From that point forward,

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16  
17 <sup>4</sup> Through the testimony of Arthur Steiner, an attorney who previously worked as a Patent Examiner,  
18 Symbol and Cognex sought to challenge the process by which the Lemelson patents were issued contending  
19 that they were never really thoroughly reviewed by Patent Examiners in the U.S. Patent Office. Steiner's  
20 testimony, however, without apparent foundation as to precisely what the Patent Examiners considering the  
21 Lemelson patent applications had in fact done, went to the extreme of opining that Patent Examiners sometimes  
22 "punt" when they are confused or unable to determine whether they are really dealing with something new, and  
23 may under such circumstances issue a patent with a "terminal disclaimer," although Mr. Steiner denied ever  
24 doing so himself during his years as a Patent Examiner. Viewed in its most pejorative light, Steiner's testimony  
25 could be read as a strong indictment of the U.S. Patent Office in which Patent Examiners are limited to  
26 approximately 19 hours per patent review and when confronted with applications as complicated as those  
involved with the Lemelson patents, are put in a position of falsely representing that they had reviewed  
materials when in fact they had not. Worse, Steiner testified that the circumstances have been recognized "not  
only judicially, but in Congress...." See Trial Transcript Doc. 434 at p. 96. Although the Court has no doubt  
Mr. Steiner holds the opinions expressed, the Court gives his testimony very little weight and finds it an  
inadequate basis upon which to base any factual findings or legal conclusions in this case. That the Patent  
Office review of the Lemelson applications was protracted and complicated is obvious to anyone with even a  
glancing familiarity with this case. Nonetheless, the Patent Office ultimately issued patents to Lemelson and  
the Court accepts that fact as established.

1 the public was entitled to assume that what was not claimed was dedicated to the public.  
2 Maxwell v. Baker, 86 F.3d 1098, 1106 (Fed. Cir. 1996). Moreover, by 1987, every claim  
3 that Lemelson had applied for in his 1972 application or earlier had issued as a patent. The  
4 circumstances warranting application of prosecution laches here includes not only the delay  
5 between the filing of the original application and the issuance of the claims, and the delay in  
6 presenting the claims to the patent office for the first time, but the following combination of  
7 factors asserted by Symbol and Cognex which the Court finds are strongly supported by the  
8 evidence:

9 (1) Mr. Lemelson's original disclosures were made public in the 1960's  
10 and those patents expired by the early 1980's; (2) before the asserted  
11 claims were filed numerous articles and patents describing machine  
12 vision and bar code scanning were published, and commercial products  
13 were developed and marketed; (3) Mr. Lemelson was aware of the  
14 developments in the machine vision and bar code fields, and yet he still  
15 waited; (4) Mr. Lemelson systematically extended the pendency of his  
16 applications by sitting on his rights, and sequentially filing one  
17 application at a time so that he could maintain copendency while  
18 waiting for viable commercial systems to be designed and marketed;  
19 and, (5) Mr. Lemelson (and his new counsel) then drafted and  
20 prosecuted hundreds of new claims in the late 1980's and 1990's  
21 specifically worded to cover those commercial systems.

22 Joint Post Trial Brief, Section III, Prosecution Laches at pp. 78-79.

23 Although Symbol and Cognex have not demonstrated that Lemelson  
24 "intentionally stalled" securing the patents at issue, such a finding is not required to support  
25 the defense of prosecution laches. In accord with In Re: Bogese, 303 F.3d at 1369,  
26 unreasonable delay alone is sufficient to apply prosecution laches without the requirement  
27 that Lemelson intended to gain some advantage by the delay. At a minimum, Lemelson's  
28 delay in securing the asserted claims amounts to culpable neglect as he ignored the duty to  
29 claim his invention promptly. Johnson & Johnson Assoc. Inc. v. R.E. Service Co., 285 F.3d  
30 1046, 1054 (Fed. Cir. 2002). The prejudicial effect of Lemelson's failure to assert his  
31 claims without unreasonable delay is that suffered by the public, and privately by Symbol

1 and Cognex and others, which were denied the ability to distinguish that which is claimed  
2 by Lemelson from that which is not.

3 More than five million United States patents have issued from 1914 through  
4 2001. Lemelson's own exhibits demonstrate that of the 325 patents that issued in that  
5 period with a prosecution pendency of longer than eleven years, Lemelson holds the top  
6 thirteen positions for the longest prosecutions. Some of the claims asserted by Lemelson in  
7 this case will not expire until 2011, fifty-five years after the 1956 application was filed and  
8 forty-eight years after the application issued as a patent. The evidence adduced at trial is  
9 abundant that during that period, machine vision and bar code technology was developed by  
10 many who had never heard of the Lemelson patents. If the defense of prosecution laches  
11 does not apply under the totality of circumstances presented here, the Court can envision  
12 very few circumstances under which it would. To conclude otherwise would remove from  
13 the public domain subject matter arguably disclosed in Lemelson's applications, but not  
14 timely claimed in a patent, and by any meaningful standard would unreasonably delay the  
15 time when the public would be free to use Lemelson's claimed inventions.

16 Of course, Jerome Lemelson died in 1997, and thus cannot testify to the  
17 circumstances resulting in the delay. Notwithstanding the testimony of Lemelson's expert  
18 John Witherspoon that Lemelson followed "accepted and reasonable practices" in  
19 prosecuting his claims, the record demonstrates that he did not. Decades of delay preceded  
20 the assertion of patent claims and Lemelson has offered no adequate explanation for that  
21 delay.

22 Application of the defense of prosecution laches is also warranted in this case  
23 based upon the strong evidence adduced at trial of intervening private and public rights.  
24 Symbol, 277 F3d at 1364; Webster, 264 U.S. at 471. Those intervening rights are  
25 evidenced by the use of products developed, manufactured and sold by Symbol and Cognex,  
26 as well as by third-party products, patents and articles which were explained in detail at trial

1 by Edward Barkan, David Collins, William Silver, Justin Testa, Arnold Reinhold,  
2 Dr. Joseph Wilder, Dr. David Allais,<sup>5</sup> and Dr. Berthold Horn.

3 Prosecution laches acts to protect the public by forcing patentees to file patent  
4 claims in a timely manner. Beyond the extraordinary delay presented here, the record also  
5 shows that Lemelson effectively extended his patent monopoly by maintaining co-pendency  
6 for nearly forty years through continuation practice, and added new claims to cover  
7 commercial inventions in the market place years after his original patents had expired. This  
8 is precisely the type of prejudice to the public which the equitable doctrine of prosecution  
9 laches is designed to guard against. Pfaff v. Wells Electronics, 525 U.S. 55 at 63-64  
10 (1998), and Symbol, 277 F.3d at 1364.

11 In sum, Lemelson's delay in securing the asserted patent claims is unexplained  
12 and unreasonable. Plaintiff's ample evidence of intervening rights vividly illustrates the  
13 type of public and private injury which can result from an unreasonable delay in prosecuting  
14 patent claims. As a consequence, Lemelson's asserted claims must be deemed  
15 unenforceable due to prosecution laches.

#### 16 17 **IV. THE ACCUSED PRODUCTS**

18 Symbol manufactures and sells laser and CCD bar code readers. A bar code is  
19 an array of light and dark areas called bars and spaces which are arranged in sets of  
20 predefined patterns which, when put together in a particular sequence, encode information.  
21 There are a variety of bar codes symbologies which encode information using different sets  
22 of characters or bar space patterns, and different sets of decode rules.

23  
24 <sup>5</sup> Having considered Lemelson's objections to two claim charts offered by Symbol and Cognex during  
25 the examination of Dr. David Allais, Exhibits 2899A and 2899C, and Lemelson's objections to the first and  
26 third columns of Exhibit 3536, and having further considered the post-trial briefs of the parties regarding  
Lemelson's objections, the Court finds that Lemelson's objections should be overruled and the foregoing  
exhibits are hereby admitted.

1                   **A. Operation of the Accused Symbol Laserscan Bar Code Readers.**

2                   The symbology rules that define valid bar code patterns are designed to enable  
3 successful scanning despite wide variations in spot, speed across the bar code, and distance  
4 between the bar code and the scanner. Just as words can be written in different sizes,  
5 colors, fonts and shapes and still be decoded or read, a bar code is read by understanding  
6 the relationship between the bars and spaces that make up the bar code rather than by  
7 matching an image of a bar code to an image stored in a memory or by measuring the  
8 individual bars and spaces.

9                   One of the most common bar code symbologies is the Universal Product Code  
10 (“UPC”), which is used to label a wide variety of consumer products. There are, however,  
11 several other bar code symbologies. Typically, a bar code is printed as black or contrasting  
12 dark-colored bars on a white or light-colored background. The background forms the  
13 spaces between the dark-colored bars.

14                   Each of the accused Symbol Laserscan bar code readers includes a solid state or  
15 gaseous laser that generates a beam of laser light that appears as a spot. In the Symbol  
16 Laserscan bar code readers, a rapidly-oscillating mirror in the device reflects the beam of  
17 laser light causing it to move rapidly back and forth across the scanned surface. As a result,  
18 instead of a stationary spot, the rapidly-moving beam traces a single-line back-and-forth  
19 pattern at such high speed that it appears to the human eye to look like a stationary red line.

20                   In the Symbol Laserscan bar code readers, the spot of laser light does not move at  
21 a constant speed as it traces a line. The spot accelerates from a stop at either end of the line  
22 pattern to the highest velocity in the middle of the line pattern and then decelerates to stop  
23 at the opposite end of the line pattern. The speed of the laser spot varies depending on the  
24 distance between the bar code reader and the object being scanned. The further away an  
25 object is from the bar code reader, the faster the spot travels. Reflections from the surface  
26 being scanned are received in the bar code reading unit where the reflected light, which

1 varies in intensity, impinges on a photodetector inside the bar code reading unit. The  
2 photodetector in turn emits an electrical signal whose amplitude is proportional to the  
3 amount of light that strikes it. The signal output of the photodetector is an analog signal  
4 which is amplified and filtered, but which is not stored in memory in the Symbol Laserscan  
5 devices. Instead, the filter-derivative signal is converted into a digitized bar pattern signal  
6 and is sent to a counter which creates a series of counts reflecting the high and low states of  
7 the digitized bar pattern. The output of the counter, expressed in a set of numbers, is then  
8 sent to a central processing unit which applies a set of rules or algorithms to decode the  
9 counts. Each bar code symbology has its own set of rules for this decoding process. When  
10 a Symbol Laserscan bar code reader successfully decodes the counts, it produces as output  
11 the information encoded in the bar code.

12           Symbol's bar code readers perform this decoding process even though the  
13 scanner's distance and orientation in relation to the bar code being scanned is neither  
14 predetermined, fixed, or known. Because there is no comparison with a prerecorded or  
15 reference signal, as the evidence establishes is required with respect to the Lemelson  
16 claims, the bar code being scanned may be printed in various sizes and may be read at  
17 varying distances and orientations.

#### 18           **B. Operation of Symbol's Imaging Bar Code Readers**

19           Symbol also manufactures and sells Symbol Imaging bar code readers which  
20 contain Light-Emitting Diodes ("LEDs") to provide an external light source. A multiple  
21 element lens focuses the image of the object onto a two-dimensional CCD array. When a  
22 bar code is imaged, the intensity of the light received by the pixels in the CCD array varies  
23 because the bars of the bar code absorb more light than the spaces. Each pixel of the CCD  
24 array accumulates a charge proportional to the light level and exposure time. The electrons  
25 accumulated in each pixel are sequentially sifted out and converted into an analog electrical  
26 signal, whose instantaneous voltage level is proportional to the amount of light energy

1 received by the particular pixel whose charge is being read at that moment. Once again, the  
2 central processing unit applies a set of rules or algorithms to the stored pixel values to  
3 attempt to identify areas of interest within the captured image that might contain a bar code  
4 image. If one or more such areas are found, then each such area is examined further to  
5 identify the type of bar code symbology that could be present, and the appropriate decode  
6 algorithms are applied. The output of a Symbol Imaging bar code reader is then sent to a  
7 host computer that can retrieve information related to the items scanned.

### 8 **C. Accused Cognex Products**

9 Explanation of the machine vision systems developed and sold by Cognex was  
10 provided principally by the testimony of the Founder of Cognex, William Silver, and by the  
11 head of Cognex' Surface Inspection Division, Dr. Markku Jaaskelainen. Cognex systems  
12 utilize sensors, and analog to digital converters that transform light captured by each pixel  
13 in the sensor into a gray scale digital image (an array of numbers that correspond to the  
14 brightness of each pixel) and proprietary computer software programs that implement  
15 statistical pattern recognition techniques to find, identify and inspect an object in the gray  
16 scale digital image. Cognex systems have the capability to locate the particular object in a  
17 digital image containing many other objects, and to find and read serial numbers, bar codes  
18 and other symbologies. Additionally, Cognex systems measure dimensions and detect  
19 surface flaws and defects. The information generated by Cognex systems is used to control  
20 a manufacturing process by rejecting non-conforming parts or guiding robots to retrieve and  
21 assemble parts.

22 Since there are always substantial variations in the location and orientation of an  
23 object presented to Cognex systems, unlike Lemelson's proposed systems which must use  
24 pre-positioning, Cognex systems do not. Indeed, objects are rarely if ever presented at  
25 Cognex systems in a predetermined or fixed location or orientation. The very purpose of  
26 using machine vision is to find an object wherever it may be in the field of view.

1           Cognex' Modular Vision Systems Division develops, manufactures and sells  
2 three product lines known as MVS 8000, Checkpoint and InSight for machine vision  
3 applications involving discreet objects. The core of Cognex' MVS product family is a  
4 library or proprietary general purpose software algorithms or "vision tools" that process and  
5 analyze digital gray scale images using microprocessors enhanced to perform more than a  
6 billion calculations per second. The software tools are programmed and combined by  
7 Cognex customers to optimize object recognition and reporting depending on the operating  
8 environment and the task at hand. MVS products are generally sold, either directly or  
9 through system integrators, to manufacturers of capital equipment and machinery used in  
10 the production of semiconductors, circuit boards, pharmaceuticals, automobiles, medical  
11 devices, electronics, and packaging.

12           Cognex' Checkpoint products are built "on top of" the MVS 8000 software  
13 library and require less programming expertise. Checkpoint products are targeted to end-  
14 users, as opposed to original equipment manufacturers or system integrators, and typically  
15 are used to guide robots handling automotive parts, verify cell phone assembly, and  
16 generally inspect consumer and medical products and product packaging.

17           Cognex' InSight product family consists of a line of machine vision systems that  
18 include a CCD sensor with a built-in digital signal processor and general purpose software  
19 algorithms that are functionally similar to the general purpose software library of the MVS  
20 8000 line. InSight products are used in a variety of applications such as inspecting bottle  
21 caps and contents, and reading semiconductor wafer identification symbols.

22           Cognex' Surface Inspection Systems Division ("SISD") manufactures equipment  
23 and software intended for continuous objects, such as paper, steel, and other materials  
24 manufactured in webs or rolls or sheets. These systems are capable of detecting, locating,  
25 counting, measuring, and classifying potential defects wherever they may appear on a fast-



1 moving sheet or roll of material. This particular system was demonstrated to the Court at  
2 trial being used in connection with the manufacture of paper products.

3 In utilizing Cognex systems, an object is presented to an imaging sensor by a  
4 conveyor or other transport mechanism and a programmable controller or a photodetector  
5 signals the sensor to take one or more images of the object as it arrives before or passes by  
6 the sensor. Illumination sources may be utilized to accentuate the features of the object  
7 based on its shape and surface characteristics and to determine how the object reflects light.  
8 Users of Cognex products generally use CCD sensors to capture a run-time image of a  
9 scene that may or may not contain an object of interest. Each pixel in a CCD array  
10 measures brightness at a point in the image by accumulating a charge proportional to the  
11 amount of light falling on it over a brief period (typically 1/30th of a second). This  
12 produces a stair-step signal where voltage corresponds to brightness and each step  
13 corresponds to a particular pixel. The voltage of each pixel is measured at a sample point  
14 and a flash analog to digital converter assigns a number representing the brightness/voltage  
15 or "gray scale" level, of each pixel at the sample point. The digital gray scale values of the  
16 pixels are stored in random access memory for analysis and processing. Cognex utilizes  
17 proprietary or patented software algorithms to process and analyze digital images in order to  
18 find, measure, inspect and identify objects despite problems created by the variable  
19 appearance and unknown location and orientation of objects in run-time images.

20 As with the products manufactured by Symbol, Cognex machine vision systems  
21 do not analyze objects in known or predetermined positions. Cognex machine vision  
22 systems either process and analyze an entire digital image or a smaller two-dimensional area  
23 in which an object is expected to be found. Cognex systems employ image analysis  
24 software algorithms to analyze a processed gray scale image to find the image of an object  
25 of interest or to inspect and measure objects. Cognex also manufactures several software  
26 tools for interpreting bar code and two-dimensional symbologies and calibration products

1 which make it possible to transform image or pixel units into real-world units such as  
2 centimeters so that information concerning the location or dimensions of an object can be  
3 used by automation and robotic equipment.  
4

## 5 V. AN EFFECTIVE FILING DATE

6 Before assessing the claims and counterclaims advanced respectively by Symbol,  
7 Cognex and Lemelson, it is necessary to determine the effective filing date of the claims-in-  
8 suit. For a claim in a later-filed application to be entitled to the filing date of an earlier  
9 application under 35 U.S.C. § 120, the disclosure of the earlier application must comply  
10 with the requirements of 35 U.S.C. § 112, ¶ 1. Reiffin v. Microsoft Corp., 214 F.3d 1342,  
11 1346 (Fed. Cir. 2000). Section 112, ¶ 1 requires, inter alia, that the claims be enabled and  
12 described. The effective filing date determines the scope of the prior art. Thus, if  
13 Lemelson is entitled to a 1963 filing date instead of a 1956 filing date, intervening art with  
14 an effective dates between 1956 and 1963 will become invalidating prior art to the claim.

15 Lemelson contends that 68 of the claims in suit are entitled to priority from the  
16 1954 Application in accord with 35 U.S.C. § 120. Specifically, the common specification  
17 claims priority under 35 U.S.C. § 120 to Lemelson's 1963 Application, which in turn claims  
18 priority to Lemelson's 1956 and 1954 Applications. The Court finds, however, that  
19 Lemelson has failed to prove that the 1963 Application is a continuation-in-part of the 1954  
20 Application as required under § 120, nor has Lemelson demonstrated the relationship of the  
21 1954 Application to the 1963 Application as required by Patent Office Rule 78(a). As a  
22 consequence, Lemelson cannot rely on the 1954 Application as intrinsic evidence in  
23 connection with the construction of claim terms. Although Lemelson's 1963 Application is  
24 characterized by Lemelson as a continuation-in-part of the 1954 Application, the asserted  
25 relationship is not revealed by the 1963 Application. In re: Daniels, 144 F.3d 1452, 1454-  
26 57 (Fed. Cir. 1998). As a result, the 1954 Application and its prosecution history, cannot be

1 considered as part of the chain of applications leading to the patents-in-suit and cannot be  
2 considered in construing the claims at issue. The Court therefore finds that Lemelson  
3 claims-in-suit are not entitled to priority from Lemelson's 1954 Application under 35  
4 U.S.C. § 120.

## 6 VI. CLAIM CONSTRUCTION

7 Claim construction of the patents-in-suit is relevant to both validity and  
8 infringement. The role of claim construction is not to limit or broaden the claims, but to  
9 define, as a matter of law, the invention that has been patented. Netword, LLC, v. Centraal  
10 Corp., 242 F.3d 1343, 1352 (Fed. Cir. 2001). Construing claims must focus on the  
11 language of the claims themselves "for it is that language that the patentee chose to use to  
12 particularly point out and distinctively claim the subject matter which the patentee regards  
13 as his invention." Brookhill-Wilk 1 LLC v. Intuitive Surgical, Inc., 326 F.3d 1215, 1218  
14 (Fed. Cir. 2003).

15 "To construe a patent claim, a court first analyzes the intrinsic evidence of  
16 record—the claims and written description of the patent itself, and, if in evidence, the  
17 prosecution history." Biovail Corp. Intn'l v. Andrx Pharms., Inc., 239 F.3d 1297, 1300  
18 (Fed. Cir. 2001). Where the meaning of a disputed claim term is clear from the intrinsic  
19 evidence, it cannot be altered by external evidence or testimony and competitors are entitled  
20 to rely on the public record of the patent. Key Pharms. v. Hercon Labs. Corp., 161 F.3d  
21 709, 716-17 (Fed. Cir. 1998). In construing claims, the Court gives claim terms their  
22 ordinary meaning as understood by a person of ordinary skill in the art. Id. Terms in a  
23 claim are not given their ordinary meaning, however, where it appears from the patent and  
24 file history that the terms were used differently by the patentee, Southwall Techs., Inc., v.  
25 Cardinal IG Co., 54 F.3d 1570, 1578 (Fed. Cir. 1995), or when the ordinary meaning of the  
26 term "deprives the claim of clarity such that there is 'no means by which the scope of the

1 claim may be ascertained from the language used.” Bell Atlantic Network Services, Inc.,  
2 v. Covad Communications Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001).

3 Lemelson maintains that the Court cannot begin to address claim construction or  
4 written description until it has defined a person of ordinary skill in the art with regard to the  
5 invention at issue. Weather Engineering Corp. v. United States, 614 F.2d 281, 287 (Ct. Cl.  
6 1980). The relevant inquiry with regard to claim construction is how a person of ordinary  
7 skill in the art would understand the claim terms at the time of the invention. See Markman  
8 v. Westview Instruments, Inc., 52 F.3d 967, 986 (Fed. Cir. 1995). A person of ordinary  
9 skill in the art is not an actual person, but a hypothetical construct and “skill in the art” is to  
10 be determined as of the time of the invention, which may be the filing date of a patent  
11 application. Leggett and Platt, Inc. v. Hickory Springs Manufacturing Co., 285 F.3d 1353,  
12 1357 (Fed. Cir. 2002). Many factors contribute to determining the characteristics of this  
13 hypothetical person of ordinary skill in the art including the educational level of the  
14 inventor, the educational level of those who worked in the relevant industry, the  
15 sophistication of the technology involved in the invention, the various prior art approaches  
16 employed regarding the problem allegedly solved by the invention, the types of problems  
17 encountered in the art, and the rapidity with which innovations are made in the field. See  
18 Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F.2d 955, 962-63 (Fed. Cir.  
19 1986).

20 The testimony of Dr. Horn on behalf of Symbol and Cognex, and by Dr.  
21 Williamson on behalf of Lemelson focused in part on the definition of a person of ordinary  
22 skill in the art for purposes of this case. Essentially, Dr. Williamson expressed the opinion  
23 that a person of ordinary skill in the art pertinent to the asserted patents in this case would  
24 be people skilled in three different arts: (1) scanning; (2) computers and data analysis; and  
25 (3) manufacturing or production engineering. The Court, however, finds the testimony of  
26 Dr. Horn on this issue to be the more persuasive. Specifically, Dr. Horn describes the

1 person of ordinary skill in the art as an electronic engineer with about two years experience  
2 in signal processing and television electronics. As Dr. Williamson and Dr. Grindon  
3 acknowledged on behalf of Lemelson, that particular person of ordinary skill in the art  
4 could not practice the inventions claimed by Lemelson.

5 Because a patentee's specific use of a term is dispositive, "claim language must  
6 always be construed in light of the specification." MSM Invs. Co. v. Carolwood Corp., 259  
7 F.3d 1335, 1339 (Fed. Cir. 2001). The relevant figures and drawings and the patent abstract  
8 also assist in determining the proper meaning of the claims. In Altiris, Inc. v. Symantic  
9 Corp., 318 F.3d 1363, 1370 (Fed. Cir. 2003), the Federal Circuit explained conditions under  
10 which a claim term will not carry its ordinary meaning:

11 First, the claim term will not receive its ordinary meaning if the  
12 patentee acted as his own lexicographer and clearly set forth a  
13 definition of the disputed claim term in either the specification or  
14 prosecution history. Second, a claim term will not carry the ordinary  
15 meaning if the intrinsic evidence shows that the patentee distinguished  
16 that term from prior art on the basis of a particular embodiment,  
expressly disclaims subject matter, or describe a particular embodiment  
as important to the invention. Third, . . . a claim term will not have its  
ordinary meaning if the term "chosen by the patentee so deprives the  
claim of clarity" as to require resort to other intrinsic evidence for a  
definite meaning.

17 Furthermore, claims must be read in the context of the invention that is described  
18 in the specification which acts as a dictionary where it expressly defines terms used in the  
19 claims or when it defines terms by implication. Bell Atlantic Network Services, Inc. v.  
20 Covad Communications Group, 262 F.3d at 1267. The prosecution history also plays a  
21 useful role in claim construction because it limits the interpretation of the claim terms so as  
22 to exclude any interpretation that is disclaimed during the prosecution. Southwall Techs. v.  
23 Cardinal IG Co., 54 F.3d at 1576.

24 Lemelson maintains that Symbol and Cognex avoid addressing the "features" of  
25 the inventions defined by Lemelson's asserted claims, and instead focus on a narrow and  
26 incorrect interpretation of the specific "circuits and structure" shown in selected portions of

1 Lemelson's specifications. Lemelson insists, however, that as explained by the testimony  
2 of Dr. Hunt, Lemelson's disclosure recites method claims and defines pioneering methods.

3           The principal expert called by Symbol and Cognex on the matter, however,  
4 explains the disclosure of the patents-in-suit far differently than Dr. Hunt. According to  
5 Dr. Horn, the Lemelson disclosure provides for "a very specific way of using television  
6 images to compare images of objects along scan lines and to make certain kinds of  
7 dimensional measurements along scan lines." In essence, Lemelson's disclosure provides  
8 for an analog video signal prerecorded on magnetic tape of a "standard" object which is  
9 compared point-by-point with a "test" video signal of a subsequently scanned object after  
10 passing them through various circuits called gating, clipping and logic circuits. Moreover,  
11 according to Dr. Horn, the analog video signals generated throughout the Lemelson  
12 disclosure must be representative of the image or images in the scanning field being  
13 inspected. If the test object is not positioned at the same distance, location and orientation  
14 with respect to the camera, the expected "inflections" will not occur in the gated portion of  
15 the signal where expected. Thus, according to Dr. Horn, pre-positioning is essential under  
16 the Lemelson disclosure.

17           The Court rejects Lemelson's argument that Dr. Horn's description of the  
18 scanning system described in the common specification was overly general or non-specific.  
19 The Court finds that Dr. Horn provided persuasive testimony regarding what is described by  
20 Lemelson's common specification including the requirement of pre-positioning; the  
21 arrangement of synchronization, gating and video signals on a multi-track magnetic  
22 recording medium; the method of clipping and comparing inflections; the use of location  
23 codes to identify inflections; and the use of a subtractor circuit to determine the distance  
24 between two inflections in a single line.

25           The testimony of Dr. Horn establishes that in order to practice Lemelson's  
26 invention, the patents-in-suit require that the object being scanned must be "pre-

1 positioned”—that is located at a known distance, location and orientation—relative to the  
2 camera. The requirement of pre-positioning is repeated throughout the specification and,  
3 indeed, as argued by Symbol and Cognex, the Lemelson specification never describes an  
4 embodiment without pre-positioning. This requirement of pre-positioning alone places the  
5 products manufactured and sold by Symbol and Cognex outside the scope of Lemelson’s  
6 invention.

7           The testimony of Lemelson’s expert, Dr. Hunt, that one or more persons of  
8 ordinary skill in the art reading Lemelson’s patents could have constructed a non-pre-  
9 positioned scanning system misses the mark, because the specification itself specifies that  
10 pre-positioning is required and is controlling. Netword LLC v. Centraal Corp., 242 F.3d at  
11 1352. The specification for the patents-in-suit make clear that the “invention” does not  
12 include scanning without “pre-positioning.” Thus, scanning without pre-positioning is  
13 outside the reach of the claims of the Lemelson patent. Scimed Life Systems, Inc. v.  
14 Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 1341 (Fed. Cir. 2001).

15           Additionally, the intrinsic evidence establishes that Lemelson’s invention  
16 involves scanning by the use of a television or video camera and not scanning by means of a  
17 laser or CCD camera employed by Symbol and Cognex products. Indeed, the evidence  
18 clearly establishes that neither laser nor CCD cameras existed in 1956 or 1963, and that no  
19 one or ordinary skill in the art would have or could have described such scanners at that  
20 time. Moreover, all of the asserted claims required that the video signals be analyzed in a  
21 specific manner in specific ways described in the specification which are not common to the  
22 products manufactured and sold by Symbol or Cognex. Although several of the asserted  
23 claims require “computer analyzing” or “processing,” the term “computer” employed by  
24 Lemelson clearly refers to a computing circuit capable of performing a mathematical task  
25 such as subtraction, not a general purpose, programmable computer. In sum, the Court  
26 adopts the claim construction advanced by Symbol and Cognex.

1 **VII. THE ASSERTED CLAIMS ARE NOT INFRINGED**

2 “Determining whether a patent claim has been infringed involves two steps: (1)  
3 claim construction to determine the scope and meaning of the claims asserted to be  
4 infringed, following by (2) a determination of whether the properly construed claim  
5 encompasses the accused method.” Robotic Vision Systems, Inc. v. View Engineering,  
6 Inc., 189 F.3d 1370, 1374 (Fed. Cir. 1999). The Court’s previous findings regarding the  
7 structure and operation of products manufactured and sold by Symbol and Cognex, and the  
8 claim constructions drawn by the Court from the evidence adduced at trial, establishes that  
9 the accused products of Symbol and Cognex do not infringe any of the Lemelson patents-  
10 in-suit. Symbol and Cognex products do not work like anything disclosed and claimed by  
11 Lemelson, nor do those products embody each and every limitation of any claim asserted by  
12 Lemelson.

13 Symbol manufactures and sells a variety of laser and CCD bar code readers  
14 which are fundamentally different from the scanning system described and claimed in the  
15 Lemelson patents-in-suit. Most importantly, Symbol’s bar code readers do not need to be  
16 pre-positioned at a known distance or aligned at a fixed attitude relative to a bar code. The  
17 testimony of Mr. Swartz and Mr. Schuessler establish that Symbol’s bar code readers do not  
18 use a video scanning device to scan and generate video signals and the signals generated by  
19 Symbol’s bar code readers are not representative of the image in the scanning field being  
20 inspected. Symbol’s bar code readers operate on the entire analog signal generated as a  
21 result of scanning, not merely a gated predetermined portion of that signal. Neither do  
22 Symbol bar code readers use clipping or thresholding to ascertain inflections. In sum,  
23 Lemelson’s patented system could not be used to read a bar code, nor does the Lemelson  
24 common specification reveal any teaching or suggestion of catching information or  
25 identifying an article by the decoding of encoded information.



1 Similarly, Cognex systems use proprietary software algorithms that  
2 mathematically manipulate the stored gray-scale values and implement statistical pattern  
3 recognition techniques over extended two-dimensional areas to find, identify and inspect an  
4 object or feature wherever it may be. Cognex systems do not compare analog or digital  
5 signals, and they do not use fixed clippers to look for inflections as taught in the Lemelson  
6 common specification. The trial evidence demonstrated that none of the accused Cognex  
7 machine vision or Symbol bar code products uses, for example, prepositioning, analog  
8 gating or video signals, fixed-threshold clippers, multi-track magnetic media, point-to-point  
9 comparison of “inflections” and analog video signals or beaming-scanning TV cameras.  
10 Thus, Lemelson has failed to prove infringement by Symbol and Cognex products. Indeed,  
11 according to the persuasive testimony of Dr. Allais, even under Lemelson’s claim  
12 construction, the use of Symbol products does not infringe any claim.

### 13 14 **VIII. THE WRITTEN DESCRIPTION REQUIREMENT**

15 Title 35, U.S.C. § 112, ¶ 1 requires in pertinent part that “[t]he specifications  
16 shall contain a written description of the invention.” This requirement ensures that a  
17 patentee actually invented what he subsequently claims. “The purpose of the ‘written  
18 description’ requirement is broader than merely to explain how to ‘make and use’: the  
19 applicant must also convey with reasonable clarity to those skilled in the art, that as of the  
20 filing date sought, he or she was in possession of the invention.” Vas-Cath, Inc. v.  
21 Mahurkar, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). “The articulation of the written  
22 description requirement in terms of ‘possession’ is especially meaningful when a patentee is  
23 claiming entitlement to an earlier filing date under 35 U.S.C. §§ 119 or 120.” Enzo  
24 Biochem, Inc. v. Gen-Prob, Inc., 323 F.3d 956 at 969 (Fed. Cir. 2002). The written  
25 description requirement for a claim must be satisfied by the disclosure in the patent  
26 containing the claim. Reiffin, 214 F.3d at 1346. Moreover, where a patentee seeks to rely

1 on an earlier application to provide an effective filing date for a claim under Section 120,  
2 the disclosure of the earlier application must independently describe the claimed invention  
3 to satisfy the written description requirement. Reiffin 214 F.3d at 1346.

4 However, because this Court has rejected Lemelson's construction of critical  
5 terms utilized in the asserted claims, including "scanning," "analyzing," "computer  
6 analyzing/computer processing," "variations," "digitizing," and "memory," in favor of the  
7 the construction advocated by Symbol and Cognex, the Court finds it unnecessary to  
8 consider whether the Lemelson specification contains a viable written description of the  
9 invention as required by § 112, ¶ 1.

#### 11 **IX. ENABLEMENT**

12 In return for receiving the right to exclude others from making, using or selling  
13 an invention for a specified period of time, 35 U.S.C. § 112 requires that an inventor file a  
14 specification that contains:

15 . . . a written description of the invention, and of the manner and  
16 process of making and using it, in such full, clear, concise and exact  
17 terms as to enable any person skilled in the art to which it pertains, or  
18 with which it is most nearly connected, to make and use the same, and  
19 shall set forth the best mode contemplated by the inventor of carrying  
20 out his invention.

19 If the specification fails to fulfill each of the requirements of Section 112, the  
20 inventor must add new matter to the specification which in turn causes the inventor to lose  
21 the original filing date. Reiffin, 214 F.3d at 1345-46. Symbol and Cognex contend that  
22 Lemelson failed to provide sufficient information to enable a person of ordinary skill in the  
23 art to make the scanning system he disclosed regardless of whether the Court adopts  
24 Lemelson's construction of claims or those of Symbol and Cognex. Indeed, Symbol and  
25 Cognex insists that no one has ever built a "Lemelson system" because no one could do so.

1 Further, Symbol and Cognex argue that the claims are not enabled because the person of  
2 ordinary skill in the art is not really one person, but three separate people.

3 As noted infra, the Court accepts as persuasive the analysis of Dr. Berthold Horn  
4 and Dr. David Allais that the person of ordinary skill in the art for purposes of the patents-  
5 in-suit is an electronic engineer with about two years experience in signal processing and  
6 television electronics. Lemelson's own experts, Dr. Williamson and Dr. Grindon,  
7 acknowledge that such a person could not practice the inventions claimed by Lemelson. As  
8 a result, the Court concurs with the argument of Symbol and Cognex that the patent claims  
9 at issue must be held invalid for lack of enablement under 35 U.S.C. § 112.

10  
11 **X. ANTICIPATION**

12 Symbol and Cognex contend that the asserted claims of the '918 and '626 patents  
13 are invalid under 35 U.S.C. § 102 because they were "anticipated" by other prior art. "To  
14 anticipate a claim, a prior art reference must disclose every limitation of the claimed  
15 invention, either explicitly or inherently." Atlas Powder Co. v. IRECO, Inc., 190 F.3d  
16 1342, 1346 (Fed. Cir. 1999) (quoting In re: Schreiber, 128 F.3d 1473, 1477 (Fed. Cir.  
17 1997)).

18 Symbol and Cognex bear the burden of demonstrating anticipation by clear and  
19 convincing evidence. See In Re: Cruciferous Sprout Litigation, 301 F.3d 1343, 1349 (Fed.  
20 Cir. 2002). The Court finds that Symbol and Cognex have failed through the testimony of  
21 Dr. Horn or other evidence to establish that the asserted claims of the '918 and '626 patents  
22 were anticipated and thus invalid under 35 U.S.C. § 102.

23 \\\

24 \\\

1 **XI. INEQUITABLE CONDUCT**

2 Symbol and Cognex further contend that the Lemelson patents are unenforceable  
3 as a result of the conduct of one of Lemelson's attorneys, Neil Markva, who allegedly  
4 breached his duty of candor and good faith in dealing with the Patent Office during the  
5 prosecution of the applications that led to the patents-in-suit.

6 Specifically, Symbol and Cognex contend that Mr. Markva made an affirmative  
7 misstatement and withheld material information from the Patent Office in connection with  
8 claims copied from U.S. Patent 3,218,389 ("the Reed patent"). Symbol and Cognex  
9 maintain that as a result of this inequitable conduct, claims 18-22 of the '918 patent were  
10 issued to Lemelson in 1985, even though the Board of Appeals had held in 1972 that  
11 Lemelson was not entitled to the claims because his specification did not have an adequate  
12 written description of them and that the claims had already been patented by Reed in 1965  
13 and passed into the public domain in 1982 when the Reed patent expired.

14 Symbol and Cognex argue that Markva's intentional misstatements and  
15 withholding of material information about the copied Reed claims led to the issuance of  
16 U.S. Patent 4,511,918, and insist that the '918 patent should thus be held unenforceable due  
17 to the inequitable conduct of Lemelson's attorney. Moreover, Symbol and Cognex insist  
18 that Markva's inequitable conduct in connection with the Reed claims renders eight of the  
19 patents-in-suit issued as continuations of the '918 patent itself unenforceable as well.

20 Second, Symbol and Cognex allege inequitable conduct on the part of Lemelson  
21 through his attorney, Mr. Markva, in connection with the '626 patent based on alleged  
22 misrepresentations to the Patent Office Examiner Britton regarding the 1972 Opinion of the  
23 Board of Appeals.

24 To support a claim of inequitable conduct, Symbol and Cognex must establish by  
25 clear and convincing evidence that Lemelson, through his attorney, Neil Markva, materially  
26 breached the duty of candor and good faith owed to the Patent Office, and that they did so

1 with an intent to deceive. Critikon, Inc. v. Becton Dickinson Vascular Access, Inc., 120  
2 F.3d 1253, 1256 (Fed. Cir. 1997).

3 In evaluating the arguments made by Symbol and Cognex, the Court has  
4 determined it appropriate to deny Plaintiffs' Motion to Strike and to consider the deposition  
5 testimony of Patent Office Examiner Britton and Attorney Neil Markva, including  
6 Markva's deposition testimony given in Mitsubishi Elec. Co. v. Lemelson, No. CV-N-93-  
7 380 (D. Nev.). The Court finds that Symbol and Cognex have not sustained by clear and  
8 convincing evidence their burden of establishing inequitable conduct regarding the '918 and  
9 '626 patents.

## 10 11 **XII. EXCEPTIONAL CASE UNDER SECTION 285**

12 Lemelson contends that the conduct of Plaintiffs Symbol and Cognex and their  
13 counsel "exceeded reasonable litigation tactics with a strategy of obfuscation" such as to  
14 warrant a declaration by this Court that Lemelson is entitled to an award of attorneys' fees  
15 under 35 U.S.C. § 285. Title 35, U.S.C. § 285 provides for an award of reasonable  
16 attorneys' fees to a prevailing party in an exceptional case.

17 To characterize this case as "exceptional" in terms of the exhaustive history of  
18 the Lemelson patents-in-suit and the equally exhaustive record adduced at trial, including  
19 pre- and post-trial briefing, would be an understatement. Here, however, Lemelson is not  
20 the prevailing party nor does the Court find any other basis for declaring this case  
21 "exceptional" as the term is used in § 285. Therefore, the Court rejects Lemelson's claim  
22 for an award of attorneys' fees under 35 U.S.C. § 285.

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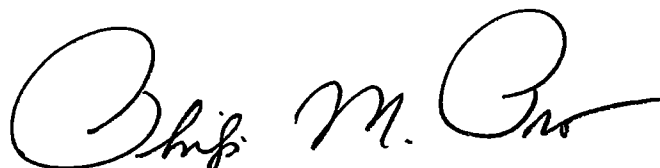
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1 **XIII. CONCLUSION**

2           Having concluded that Lemelson's patent claims are unenforceable under the  
3 equitable doctrine of prosecution laches; that the asserted patent claims as construed by the  
4 Court are not infringed by Symbol or Cognex because use of the accused products does not  
5 satisfy one or more of the limitations of each and every asserted claim; and that the claims  
6 are invalid for lack of written description and enablement even if construed in the manner  
7 urged by Lemelson, the Court finds that Judgment should be entered in favor of Plaintiffs  
8 Symbol Technologies, Inc., Accu-sort Systems, Inc., Intermec Technologies Corp.,  
9 Metrologic Instruments, Inc., PSC Inc., Teklogix Corp. and Zebra Technologies Corp. and  
10 Cognex Corp., and against Defendant Lemelson Medical, Education & Research  
11 Foundation, Limited Partnership on Plaintiffs' Complaint for Declaratory Judgment  
12 pursuant to 28 U.S.C. § 2201(a).

13           IT IS SO ORDERED.

14  
15 DATED: January 23, 2004

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18 PHILIP M. PRO  
19 Chief Judge  
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# United States Patent [19]

Lemelson

[11] Patent Number: **4,979,029**

[45] Date of Patent: \* **Dec. 18, 1990**

**[54] METHOD AND SYSTEMS FOR SCANNING AND INSPECTING IMAGES**

[76] Inventor: **Jerome H. Lemelson, 48 Parkside Dr., Princeton, N.J. 08540**

[\*] Notice: The portion of the term of this patent subsequent to Apr. 16, 2002 has been disclaimed.

[21] Appl. No.: 500,288

[22] Filed: **Mar. 27, 1990**

**Related U.S. Application Data**

[60] Continuation of Ser. No. 906,969, Sep. 15, 1986, which is a continuation of Ser. No. 723,183, Apr. 15, 1985, Pat. No. 4,660,086, which is a continuation of Ser. No. 394,946, Jul. 2, 1982, Pat. No. 4,511,918, which is a division of Ser. No. 13,608, Feb. 16, 1979, Pat. No. 4,338,626, which is a division of Ser. No. 778,331, Mar. 16, 1977, Pat. No. 4,148,061, which is a continuation of Ser. No. 254,710, May 18, 1972, Pat. No. 4,118,730, which is a continuation-in-part of Ser. No. 267,377, Mar. 11, 1963, abandoned, which is a continuation-in-part of Ser. No. 626,211, Dec. 4, 1956, Pat. No. 3,801,379, and a continuation of Ser. No. 477,467, Dec. 24, 1954, abandoned.

[51] Int. Cl.5 ..... **H06N 7/18**  
 [52] U.S. cl. .... **358/93; 358/106; 356/380**  
 [58] Field of Search ..... **358/93, 105, 106, 108, 358/133, 180, 101, 125; 382/34; 356/380, 386, 387; 360/9.1, 72.1**

**[56] References Cited**

**U.S. PATENT DOCUMENTS**

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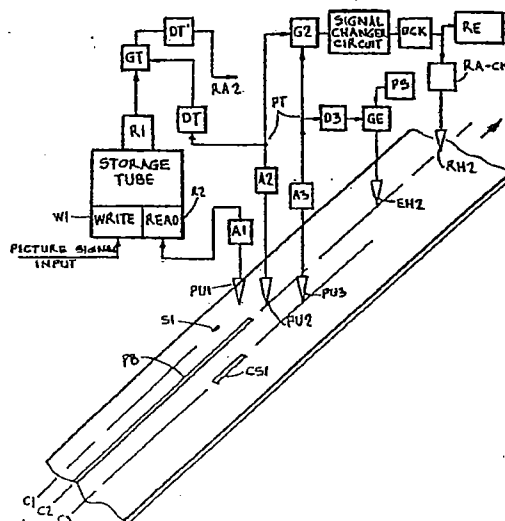
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*Primary Examiner*-John K. Peng  
*Attorney, Agent, or Firm*-Gerald D. Hosier; Steven G. Lisa

**[57] ABSTRACT**

An automatic scanning apparatus and method for detecting the presence of one or more objects in an image field under investigation or inspection. Electro-optical scanning means, such as a television camera, is employed to scan an image field and generate output electrical signals which vary in accordance with variations in the optical characteristics of the matter and objects in the image field scanned. Such signals are computer processed and analyzed to generate coded electrical signals which define optical characteristics of portion of the image field scanned, such as objects or the images of objects scanned, their shape, color of a combination of color and shape. Electronic means is provided to generate further coded electrical signals which indicate the presence of one or more objects in the image field scanned and may be used to effect intelligent indications thereof, to control one or more devices such as a motor or motors, and/or to provide information for computational purposes to be processed and utilized by a computer. In one form, the shape of an object or objects is detected and coded signals generated are employed to effect a comparison of such shape with information relating to the shapes of known objects to identify the object or objects scanned. In another form, the color or surface characteristics of an object is detected and resulting signals indicative thereof are compared with information derived from a memory to identify either the object or its color or surface characteristics. In a third form both shape and color are detected and compared with recorded information for identification purposes.

**16 Claims, 13 Drawing Sheets**



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DISTRICT OF NEVADA

BY \_\_\_\_\_ DEPUTY  
UNITED STATES DISTRICT COURT  
DISTRICT OF NEVADA

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SYMBOL TECHNOLOGIES, INC., et al., )

Plaintiffs, )

CV-S-01-701-PMP (RJJ)  
(Base File)

v. )

LEMELSON MEDICAL, EDUCATION )  
& RESEARCH FOUNDATION, )  
LIMITED PARTNERSHIP, )

Defendant. )

COGNEX CORPORATION, )

Plaintiff, )

v. )

LEMELSON MEDICAL, EDUCATION )  
& RESEARCH FOUNDATION, )  
LIMITED PARTNERSHIP, )

CV-S-01-702-PMP (RJJ)

Defendant. )

TELXON CORPORATION, )

Plaintiff, )

v. )

LEMELSON MEDICAL, EDUCATION )  
& RESEARCH FOUNDATION, )  
LIMITED PARTNERSHIP, )

CV-S-01-703-PMP (RJJ)

Defendant. )

JUDGMENT



1 Having concluded that Lemelson's patent claims are unenforceable under the  
2 equitable doctrine of prosecution laches; that the asserted patent claims as construed by the  
3 Court are not infringed by Symbol or Cognex because use of the accused products does not  
4 satisfy one or more of the limitations of each and every asserted claim; and that the claims  
5 are invalid for lack of written description and enablement even if construed in the manner  
6 urged by Lemelson,

7 IT IS ORDERED that JUDGMENT is hereby entered in favor of Plaintiffs  
8 Symbol Technologies, Inc., Accu-sort Systems, Inc., Intermec Technologies Corp.,  
9 Metrologic Instruments, Inc., PSC Inc., Teklogix Corp. and Zebra Technologies Corp. and  
10 Cognex Corp., and against Defendant Lemelson Medical, Education & Research  
11 Foundation, Limited Partnership on Plaintiffs' Complaint for Declaratory Judgment  
12 pursuant to 28 U.S.C. § 2201(a).

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14 DATED: January 23, 2004

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18 Chief Judge  
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