

The opinion in support of the decision being entered today is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* LEONARD H. BIEMAN

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Appeal 2004-0659  
Application 09/111,978<sup>1</sup>  
Technology Center 2800

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ORAL HEARING: June 27, 2006

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*Before* GARRIS, JERRY SMITH, RUGGIERO, GROSS, and MacDONALD,  
*Administrative Patent Judges.*<sup>2</sup>

PER CURIAM

DECISION ON APPEAL UNDER 35 U.S.C. § 134

AFFIRMED

A. INTRODUCTION

1. This is in response to Appellant's Request for Rehearing<sup>3</sup> of a Decision on Appeal (the decision) of the Board of Patent Appeals and Interferences (the

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<sup>1</sup> Application filed July 8, 1998, seeking to reissue U.S. Patent 5,646,733, issued July 8, 1997, based on application 08/593,095, filed January 29, 1996. The real party in interest is PPT Vision, Inc., Amended Appeal Brief (filed March 17, 2003), page 4.

<sup>2</sup> Administrative Patent Judges Jerry Smith, Ruggiero, and Gross originally heard the appeal and entered a decision on March 31, 2005. Subsequent to Appellant's Request for Rehearing (the request) filed May 31, 2005, the panel was expanded to include Administrative Patent Judges Garris and MacDonald. Appellant was offered, and accepted, an opportunity for additional oral argument.

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Board) mailed March 31, 2005, wherein the Board affirmed the Examiner's rejections of claims 30 through 85.

2. The reissue application on appeal seeks to reissue U.S. Patent 5,646,733, issued July 8, 1997, based on application 08/593,095, filed January 29, 1996.
3. The reissue application contains claims 1 through 85.
4. Claims 30 through 85 have been rejected under 35 U.S.C. § 251 on the grounds that these claims seek to recapture subject matter surrendered when the patent sought to be reissued was granted.
5. Appellant filed an Appeal Brief on May 6, 2002, and an Amended Appeal Brief (hereafter, the Brief) on March 17, 2003, fully replacing the earlier filed Appeal Brief.
6. Claims 30 through 85, reproduced in Appendix B (the claim appendix) of the Brief, are the claims on appeal before the Board of Patent Appeals and Interferences (hereafter, the Board).
7. On March 31, 2005, the Board mailed a Decision on Appeal (hereafter, the Decision), affirming the examiner's rejection of claims 30 through 85.
8. Appellant filed a Request for Rehearing of the Decision on May 31, 2005.
9. The panel was expanded to a five judge panel.
10. Appellant was offered and accepted an opportunity for a new oral argument before the expanded panel.
11. In view of the second oral hearing and the modification of the original decision by the addition of opinions with new rationales presented *infra*, we designate this a new decision. See 37 CFR 41.52(a).

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<sup>3</sup> Filed on May 31, 2005.

B. FINDINGS OF FACT

The following findings of fact are believed to be supported by a preponderance of the evidence.

THE INVENTION

1. The invention relates to the non-invasive three-dimensional measurement of surface contours using technology such as moiré technology with a novel approach that allows continuous scanning of a surface (U.S. Patent 5,646,733, at Col. 3, lines 24-27).

2. The invention can be understood by reference to Figures 1 and 2 of the drawings, which are reproduced in Appendix 1 of this opinion.

3. FIG. 1 is a schematic view of a machine vision system **10** including an optical head **12** for carrying out the method and system of the present invention (Col. 2, lines 65-67).

4. FIG. 2 is a schematic view illustrating the details of a first embodiment of the optical head **12** of FIG. 1 (Col. 3, lines 1-2).

5. The system **10** provides high speed, scanning phase measuring of an object **14** at a vision station **16** to develop dimensional information such as height information of a surface **18** of the object **14** (Col. 3, lines 17-21).

6. The object **14** moves relative to the optical head **12** as indicated by arrow **20** (Col. 3, lines 21-23).

7. The system **10** also includes a system bus **26**, which receives information from an image digitizer/frame grabber **22** and passes the information on to an IBM compatible host computer such as a Pentium PC 28 (Col. 3, lines 40-43).

8. The frame grabber **22** places each input image into a frame buffer having picture elements (Col. 3, lines 36-37).

9. Each of the picture elements may consist of an 8-bit number representing the brightness of that spot in the image (Col. 3, lines 37-39).

10. A monitor **34** is also provided to display images (Col. 4, line 9).

11. The system **10** may include input/output circuits **30** to allow the system **10** to communicate with one or more external peripheral devices such as a drive **31** or robots, programmable controllers, etc. having one or more stages (Col. 3, lines 44-47).

12. With reference to Fig. 1, U.S. Patent 5,464,733 states (*emphasis added*):

The drive **31** provides *relatively uniform and continuous movement* between the object **14** and the head **12**. The I/O circuits **30** may support a three-axis stepper board (i.e. supports multiple axis control) or other motion boards. (Col. 3, lines 48-52)

13. With reference to Fig. 2, U.S. Patent 5,464,733 states (*emphasis added*):

[A] camera of the optical head **12** preferably includes a solid-state image sensor such as a tri-linear array camera **24**. For example, the camera **24** may be the *Kodak CCD chip model KLI-2103* which has 3 rows of detector or sensing elements **25** each having 2098 CCD sensing elements per row. *Each row is physically separated by a distance equivalent to 8 pixel elements.* The camera **24** was originally designed for color scanning with a red, green, and blue color mask over each element, respectively. For the present invention, the masks are not used but rather are removed. (Col. 3, lines 53-63)

14. Referring again to Fig. 2, U.S. Patent 5,464,733 states (*emphasis added*):

[G]enerally, multiple images with different phases are obtained by moving the surface **18** of the object **14** while keeping a pattern **36** projected by a light strip projector **38** and the camera **24** *stationary with respect to each other* within the optical head **12**. The optical head **12** (i.e. when the system **10** is a scanning moiré system) has no mechanical or optical mechanism that changes the position of the projected pattern **36**. To obtain multiple phase images, there is relative movement between the optical head **12** and the measured surface **18**. (Col. 4, lines 10-19)

15. Referring once again to Fig. 2, U.S. Patent 5,464,733 states  
(*emphasis added*):

Using the tri-linear array camera **24** for scanning produces three images of the scanned surface **18** with each image being offset by a certain number of rows. *This offset is a function of the spacing between arrays and the rate at which the image of the surface **18** is moved past the sensing elements **25**.* (Col. 4, lines 33-38)

#### PROSECUTION HISTORY OF THE ORIGINAL APPLICATION

16. As noted earlier, the patent sought to be reissued was based on application 08/593,095, filed January 29, 1996 ("original application").

17. As filed, the original application contained claims 1 through 27. Claims 1 and 14 were independent claims (reproduced below). Claims 2 through 13 and 15 through 27 depended therefrom, respectively.

18. Claim 1 as originally filed read as follows:

Claim 1 (as filed). A method for high speed, scanning phase measuring of an object at a vision station to develop physical information associated with the object, the method comprising the steps of:

projecting a pattern of imagable electromagnetic radiation with at least one projector;

moving the object relative to the at least one projector at the vision station to scan the projected pattern of electromagnetic radiation across a surface of the object to generate an imagable electromagnetic radiation signal;

receiving the imagable electromagnetic radiation signal from the surface of the object with a detector having a plurality of separate detector elements;

maintaining the at least one projector and the detector in fixed relation to each other;

measuring an amount of radiant energy in the received electromagnetic radiation signal with the detector wherein the detector elements produce images having different phases of the same scanned surface based on the measurement; and

computing phase values and amplitude values for the different phases from the multiple images.

19. Claim 14 as originally filed read as follows:

Claim 14 (as filed). A system for high speed, scanning phase measuring of an object at a vision station to develop physical information associated with the object, the system including:

at least one projector for projecting a pattern of imagable electromagnetic radiation;

means for moving the object relative to the at least one projector at the vision station to scan the projected pattern of imagable electromagnetic radiation across a surface of the object to generate an imagable electromagnetic radiation signal;

a detector for receiving the imagable electromagnetic radiation signal from the surface of the object and having a plurality of separate detector elements for measuring an amount of radiant energy in the imagable electromagnetic radiation signal wherein the detector elements produce images having different phases of the same scanned surface based on the measurement;

means for maintaining the at least one projector and the detector in fixed relation to each other; and

means for computing phase values and amplitude values for the different phases from the images.

20. On August 13, 1996, the examiner entered a first Office action, rejecting claims 1 through 27 under 35 U.S.C. § 103 as being unpatentable over the following prior art:

- (1) Kuchel, U.S. Patent 5,135,308 in view of
- (2) Bullock et al. (Bullock), U.S. Patent 5,488,478.

21. Kuchel and Bullock are prior art vis-à-vis applicant under 35 U.S.C. § 102(b) and 35 U.S.C. § 102(e) respectively.

22. The examiner found that Kuchel describes “a method for non-contact measuring of [an] object surface.”

23. However, the examiner found that “Kuchel does not teach the step of moving the object relative to [a] projector.”

24. The examiner further found that Bullock shows, in the same field of endeavor, moving the object while measuring its shape.

25. The examiner noted:

Kuchel discloses a method and apparatus for non-contact measuring of object surface in which the gratings (G1 and G2) are moving and the measured object is fixed. Kuchel does not teach the step of moving the object relative to the at least one projector at the vision station to scan the projected pattern of electromagnetic radiation across a surface of the object; however, such a feature is known in the art, for example as taught by Bullock et al. Bullock et al, in the same field of endeavor, discloses a method and apparatus for measuring the shape of a surface of an object in which the steel strip 1 is moving in direction A over support surface 2, an array of line-scan cameras (5) positioned to view and record the light patterns and to process in parallel data representative of the recorded light patterns to provide a measure of the shape of the object surface (figures 1-3).

26. The examiner held that:

Those of ordinary skill in the art at the time the invention was made would have found it obvious to move the object taught by Bullock et al instead of moving the grating because they would function in the same manner. A substitution for each other is generally recognized as being within the level of ordinary skill in the art.

27. In due course, Applicant filed an amendment responding to the examiner's first Office action.

28. In the amendment, Applicant amended claims 1 and 14, as shown below.

29. Claim 1 as amended read as follows ([brackets] indicate a deletion from the claim by Applicant, underline indicates an insertion into the claim by Applicant):

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Claim 1 (Amended) A method for high speed, scanning phase measuring of an object at a vision station to develop physical information associated with the object, the method comprising the steps of:

projecting a pattern of imagable electromagnetic radiation with at least one projector;

moving the object relative to the at least one projector at a substantially constant velocity at the vision station so as to scan the projected pattern of electromagnetic radiation across a surface of the object to generate an imagable electromagnetic radiation signal;

receiving the imagable electromagnetic radiation signal from the surface of the object with a detector having a plurality of separate detector elements which are substantially uniformly spaced;

maintaining the at least one projector and the detector in a substantially fixed relation to each other;

measuring an amount of radiant energy in the received electromagnetic radiation signal with the detector wherein each of the detector elements produce [images] an image having a different [phases] phase of the same scanned surface based on the measurement; and

computing phase values and amplitude values for the different phases from the multiple images.

30. Claim 14 as amended read as follows:

Claim 14 (Amended) A system for high speed, scanning phase measuring of an object at a vision station to develop physical information associated with the object, the system including:

at least one projector for projecting a pattern of imagable electromagnetic radiation;

means for moving the object relative to the at least one projector at the vision station at a substantially constant velocity so as to scan the projected pattern of imagable electromagnetic radiation across a surface of the object to generate an imagable electromagnetic radiation signal;

a detector for receiving the imagable electromagnetic radiation signal from the surface of the object and having a plurality of separate detector elements which are substantially uniformly spaced for measuring an amount of radiant energy in the imagable electromagnetic radiation signal wherein each of the detector elements [produce images] produces an image having a different [phases] phase of the same scanned surface based on the measurement;

means for maintaining the at least one projector and the detector in a substantially fixed relation to each other; and

means for computing phase values and amplitude values for the different phases from the images.

31. In the amendment, Applicant included the following statement (emphasis added):

[F]rom an examination of Bullock it is clear that Bullock discloses the use of scanners 22 to scan laser generated light beams continuously across an object surface in a direction generally normal to the direction of movement of the object. This is contrary to the claimed teachings of the present invention wherein the object is moved relative to the at least one

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projector at the vision station so as to scan the projected pattern of electromagnetic energy across a surface of the object to generate an imageable electromagnetic radiation signal. In other words, *only with the present invention* are multiple scans coordinated with relative motion *at a substantially constant velocity of the object* to extract phase information from *substantially uniformly spaced detector elements*. Also, *the present invention is limited* in that the at least one *projector is maintained in a substantially fixed relation to the detector*.

32. The original application was then allowed.

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33. Consistent with Office practice, the claims were re-numbered as follows in the course of preparing the original application for issue:

Chronological by original claim

<u>Original claim number</u>	<u>Claim as re-numbered</u>
1	1
2	2
3	5
4	6
5	7
6	8
7	9
8	10
9	3
10	11
11	12
12	13
13	4
14	14
15	15
16	18
17	19
18	20
19	21
20	22
21	23
22	16
23	24
24	25
25	26
26	17
27	27

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Chronological by patent claim

<u>Original claim number</u>	<u>Claim as re-numbered</u>
1	1
2	2
9	3
13	4
3	5
4	6
5	7
6	8
7	9
8	10
10	11
11	12
12	13
14	14
15	15
22	16
26	17
16	18
17	19
18	20
19	21
20	22
21	23
23	24
24	25
25	26
27	27

34. U.S. Patent 5,646,733 issued July 8, 1997, based on the original application and containing claims 1 through 27.

PROSECUTION OF REISSUE APPLICATION

35. Applicant filed reissue application 09/111,978 on July 8, 1998, seeking to reissue U.S. Patent 5,646,733.

36. Applicant presented original patent claims 1 through 27 along with new reissue application claims 28 through 85 for consideration.

37. New reissue application claims 28 and 29 depended from claims 1 and 14, respectively. New reissue application dependent claims 31 through 41, 43 through 55, 57 through 59, 61 through 71, and 73 through 85, depended from new reissue application independent claims 30, 42, 56, 60, and 72, respectively.

38. Reissue application claims 15, 18, and 26 were subsequently amended to correct minor errors.

39. Reissue application claims 1 and 14 were each subsequently amended to add the limitation underlined in exemplary amended claim 1, reproduced below:

Reissue Claim 1 (Amended) A method for high speed, scanning phase measuring of an object at a vision station to develop physical information associated with the object, the method comprising the steps of:

projecting a pattern of imagable electromagnetic radiation with at least one projector;

moving the object relative to the at least one projector at a substantially constant velocity at the vision station so as to scan the projected pattern of electromagnetic radiation across a surface of the object to generate an imagable electromagnetic radiation signal;

receiving the imagable electromagnetic radiation signal from the surface of the object with a detector having a plurality of separate detector elements which are substantially uniformly spaced;

maintaining the at least one projector and the pattern of imagable electromagnetic radiation and the detector in a substantially fixed relation to each other;

measuring an amount of radiant energy in the received electromagnetic radiation signal with the detector wherein each of the detector elements produce an image having a different phase of the same scanned surface based on the measurement; and

computing phase values and amplitude values for the different phases from the multiple images.

40. New reissue application claims 30, 42, 56, 60, and 72 were subsequently amended to add the limitation underlined in exemplary amended claim 30, reproduced below:

Reissue Claim 30 (Amended). A method for high-speed scanning measurement of an object at a vision station, the vision station having a detector, in order to determine dimensional information associated with the object, the method comprising the steps of:

projecting a pattern of light;

maintaining the projected pattern of light and the detector in a substantially fixed relation to each other;

moving the object relative to the projected pattern of light so as to scan the projected pattern of light across an area of a surface of the object to generate an imagable light signal;

imaging the imagable light signal onto the detector, the detector having a first, a second, and a third detector element, wherein the area of the surface of the object is imaged onto the first detector element at a first phase of the projected pattern of light, the area of the surface of the object is imaged onto the second detector element at a second phase of the projected pattern of light and the area of the surface of the object is imaged onto the third detector element at a third phase of the projected pattern of light;

measuring with the detector an amount of light from the area of the surface of the object to the first detector element at the first phase, to the second detector element at the second phase, and to the third detector element at the third phase; and

computing dimensional information based on the measuring step.

41. Reissue application claims 1 through 29 were indicated as allowable by the examiner and are not involved in the appeal.

42. New reissue application claims 30 through 85, as amended, were rejected by the examiner and are before the Board in this appeal.

#### EXAMINER'S REJECTION

43. The examiner rejected reissue application claims 30 through 85 under 35 U.S.C. § 251 maintaining that the claims seek to "recapture" subject matter surrendered in obtaining allowance of claims during prosecution of the application which matured into the patent sought to be reissued.

44. The examiner based the rejection of claims 30 through 85 on the grounds that when faced in the original application with a rejection under 35 U.S.C. § 103 over the Kuchel and Bullock prior art patents, applicant made the following three significant amendments and two significant remarks:

(1) Applicant amended application claims 1 and 14 to include the limitation of moving the object "at a substantially constant velocity;" application claims 1 and 14 ultimately became patent claims 1 and 14, respectively.

(2) Applicant amended application claims 1 and 14 to include the limitation of the detector elements being "substantially uniformly spaced."

(3) Applicant amended application claims 1 and 14 to include the limitation of the detector and the projector being in "a substantially" fixed relationship.

(4) Applicant remarked "only with the present invention are multiple scans coordinated with relative motion at a substantially constant velocity of the object to extract phase information from substantially uniformly spaced detector elements" (underlining ours).

(5) Applicant remarked "the present invention is limited in that the at least one projector is maintained in a substantially fixed relation to the detector."

45. The examiner reasoned as follows (*see* Examiner's Answer entered July 31, 2003, pages 3-4) (*Italic emphasis added*)(**Bold emphasis in original**):

The following ground(s) of rejection are applicable to the appealed claims:

A. Claims 30-85 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See **Hester Industries, Inc. v. Stein, Inc.**, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); **In re Clement**, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); **Ball Corp. v. United States**; 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984).

a. Regarding claims 30, 42, 56, 60, and 72, a broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

In the original application (08/593,095), applicants' amendment filed on 11/18/96 inserted the limitations "**at a substantially constant velocity**", "**which are substantially uniformly spaced**", and "maintaining the at least one projector and the detector in a **substantially fixed** relation to each other" into claims 1 and 14 to overcome the rejection. *In the remarks, applicant stated that these limitations are distinct from the prior art. However, in the present reissue application, these limitations are omitted in the new independent claims 30, 42, 56, 60, and 72.* Thus, these claims constitute improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based even though it may be narrower in other respects.

b. Claims 31-41, 43-55, 57-59, 61-71 and 73-85 are dependent claims; therefore, inherit the deficiencies of the claims on which they depend.

46. The examiner entered a final rejection of claims 30 through 85 on June 22, 2001.

47. The record supports the Examiner's findings with respect to what limitations do not appear in reissue application claims 30 through 85, which were present in claims 1 and 14 of the original application, as amended.

#### THE ORIGINAL APPEAL

48. Appellant filed an Appeal Brief on May 6, 2002, and an Amended Appeal Brief (the Brief) on March 17, 2003, fully replacing the earlier filed Appeal Brief.

49. Claims 30 through 85 of Appendix B of the Brief are the claims on appeal before the Board.

50. The Examiner mailed an Examiner's Answer (hereafter, the Answer) on July 31, 2003.

51. Appellant filed a Brief in Reply (hereafter, the Reply) and Request for Oral Hearing on October 8, 2003.

52. On October 28, 2003, the examiner notified Appellant that the Reply had been entered into the record and the appeal forwarded to the Board for decision.

53. An oral hearing before the Board was held on December 8, 2004.

54. On March 31, 2005, the Board mailed a Decision on Appeal (hereafter, the Decision), affirming the examiner's rejection of claims 30 through 85.

55. On May 31, 2005, Appellant filed a Request for Rehearing of the Decision.

56. The panel was expanded and a second oral hearing before the Board was held by telephone on June 27, 2006.

#### C. DECISION ON APPEAL UNDER 35 U.S.C. § 134

The examiner has rejected claims 30 through 85 of the reissue application on appeal as being unpatentable under 35 U.S.C. 251 based on recapture. With respect to claims 30 through 85, this panel unanimously affirms the decision of the examiner.

An opinion authored by Judge Gross, joined by Judge Ruggiero, a concurring opinion authored by Judge MacDonald, joined by Judge Jerry Smith, a concurring opinion authored by Judge Garris, and Appendix 1 follow.

D. OPTIONS FOR FURTHER PROCEEDINGS

1. We recognize that our opinion (1) might be viewed as discussing points not previously brought out in the record and (2) citing Federal Circuit opinions based on Federal Circuit decisions entered after appellant filed the appeal and that our original decision has been sufficiently modified on rehearing so as to become, in effect, a new decision. We thereby designate this as a new decision.

2. We also recognize that the appeal involves a reissue application which has been pending for some time. *Cf. Pritchard v. Loughlin*, 361 F.2d 483, 487, 149 USPQ 841, 844 (CCPA 1966) (proceedings involving reissue should be handled expeditiously inasmuch as term of reissue patent is running).

3. Accordingly, in an attempt to minimize any prejudice to appellant, we exercise our discretion by authorizing applicant to proceed under any one of the following options, the choice of the option being up to appellant.

(1) Option 1: Appellant can accept our decision as final, in which case the appeal would be concluded.

(2) Option 2: Within *two (2) months* of the date of this decision, appellant may file a request for rehearing. 37 CFR § 41.52(a)(1) (2005).

(3) Option 3: Appellant may treat our decision as a final decision and seek judicial review within the time set out in 37 CFR § 1.304(a)(1) (2005).

4. The decision of the examiner rejecting claims 30 through 85 under 35 U.S.C. § 251 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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JUDGE GROSS, with whom Judge Ruggiero joins.

#### PERTINENT CASE LAW

In *Ball Corp. v. United States*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984), the Federal Circuit stated that "[t]he recapture rule bars the patentee from acquiring, through reissue, claims that are of the *same* or of *broader scope* than those claims that were canceled from the original application." *Id.* at 1436, 221 USPQ at 295. We note that the language used by the Federal Circuit did not limit the bar to "only" those claims that were canceled from the original application. The Federal Circuit continued that "the patentee is free to acquire, through reissue, claims that are *narrower* in scope than the canceled claims," but recognized that "[t]he subject matter of the claims is not alone controlling." *Id.* In other words, merely being narrower in scope than the canceled claims may not be sufficient to overcome the recapture bar. In fact, in analyzing the facts in *Ball*, the Federal Circuit held that the reissue claims were narrower in scope than the canceled claims with respect to the same limitation relied upon to overcome a prior art rejection made in the prosecution of the original application. Thus, although not explicitly stated in *Ball*, there is a suggestion from the analysis therein that the narrowing to overcome the recapture bar should relate to the same limitation relied upon to overcome the prior art rejection.

*Mentor Corp. v. Coloplast Inc.*, 998 F.2d 992, 27 USPQ2d 1521 (Fed. Cir. 1993), affirmed the suggestion that surrendered subject matter equates to that which does not include the limitation added to overcome a prior art rejection. Specifically, the Federal Circuit stated, "Coloplast correctly argues that reissue claim 6, which does not include the adhesive transfer limitation [which was added and argued to overcome the prior art rejection], impermissibly recaptures what Mentor deliberately surrendered in the original prosecution." *Id.* at 996, 27 USPQ2d at 1525. The Federal Circuit then determined whether a narrowing of the claims had occurred that was "material in relation to the

impermissible broadening," *Id.* at 996, 27 USPQ2d at 1526, or, rather, in relation to the omission of the limitation added for patentability.

*In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997), relying heavily on the analysis in *Ball* and *Mentor*, developed a three step test for determining whether the claims of a reissue application recapture surrendered subject matter. The first step is "to determine whether and in what 'aspect' the reissue claims are broader than the patent claims." *Clement* at 1468, 45 USPQ2d at 1164. The Federal Circuit looked at the individual limitations that have been broadened, stating that "a reissue claim that deletes a limitation or element from the patent claims is broader in that limitation's aspect." *Id.* The second step of the test is "to determine whether the broader aspects of the reissue claims relate to surrendered subject matter." *Id.* at 1468-69, 45 USPQ2d at 1164. The Federal Circuit looked to the prosecution history, focusing on arguments and amendments made to overcome prior art rejections, stating that "[d]eliberately canceling or amending a claim in an effort to overcome a reference strongly suggests that the applicant admits that the scope of the claim before cancellation or amendment is unpatentable." *Id.* at 1469, 45 USPQ2d at 1164. Thus, the scope of the claim prior to cancellation or amendment is generally considered to be surrendered subject matter. In fact, in setting up the third step, the Federal Circuit refers to the applicant as having "surrendered the subject matter of the canceled or amended claim,<sup>8</sup> . . . ." *Id.* However, later in the decision, in analyzing the facts of the case, the Federal Circuit determined that eliminating limitations that had been added to overcome prior art rejections rendered the reissue claims broader "in a manner directly pertinent to the subject matter that *Clement* surrendered throughout the prosecution." *Id.* at 1471, 45 USPQ2d at 1166. In other

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<sup>8</sup> We note that the term "amended" generally refers to a claim after an amendment has been entered. Thus, "canceled or amended" could refer to the claim prior to *or* subsequent to amendment. As the amended claim would equate to the patented claim, thereby rendering the patented claim surrendered, the normal reading of the term "amended" would seem to be inappropriate. Thus, we will focus on the "canceled claim," recognizing that the phrase "canceled or amended" includes something more.

words, the Federal Circuit appears to include as "surrendered subject matter" more than merely the canceled claims; the phrase also encompasses something pertaining to the limitation added in the original prosecution to overcome a prior art rejection.

If the broadening is found to relate to surrendered subject matter, the third and final step of the test is to "determine whether the surrendered subject matter has crept into the reissue claim." *Id.* at 1469, 45 USPQ2d at 1164. In other words, viewing surrendered subject matter as including more than merely the finally rejected claim, the third step is to determine whether the claims have been narrowed in the same aspects, or with respect to the same limitations, that prompted a finding of surrendered subject matter.

By analyzing the reasoning in *Mentor* and *Ball*, the Federal Circuit arrived at the following principles as an approach to the third step:

- (1) if the reissue claim is as broad as or broader than the canceled or amended claim in all aspects, the recapture rule bars the claim;
- (2) if it is narrower in all aspects, the recapture rule does not apply, but other rejections are possible;
- (3) if the reissue claim is broader in some aspects, but narrower in others, then:
  - (a) if the reissue claim is as broad as or broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim;
  - (b) if the reissue claim is narrower in an aspect germane to a prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim, but other rejections are possible.

*Clement* at 1470, 45 USPQ2d at 1165. The third step of the test in *Clement* compares the reissue claims to the canceled claims, i.e., the claims of the patented application (upon which the reissue is based) prior to the amendment that resulted in the patent. We note that the test uses the phrase "canceled or amended," which as indicated *supra*, we assume includes something more than the canceled claim. Again we will focus on the "canceled" claim only, as the alternative language appears to be cumulative in our interpretation of the test.

According to the principles set forth by the Federal Circuit, if the reissue claims are as broad in all aspects as the claims prior to the amendment, then the recapture rule bars the claims. As stated *supra*, the addition of a limitation to overcome a prior art rejection suggests an admission that the scope of the claim prior to the amendment is unpatentable. Therefore, if all limitations of the reissue claim are at least as broad as the claim prior to the amendment, then the recapture rule bars the claim. Additionally, if the reissue claim is at least as broad in an aspect related to a prior art rejection (i.e., the limitation added to overcome the reference), even if narrower in an aspect unrelated to the prior art rejection, then the recapture rule bars the claims. In other words, completely eliminating a limitation added to overcome a prior art rejection, even if accompanied by a narrowing in another area, is barred by the recapture rule.

However, if the reissue claims are narrower in all aspects (including the limitation added to overcome the reference) or in an aspect related to a prior art rejection (i.e., with regard to the limitation added to overcome the reference), even if broader in other areas, then the recapture rule does not apply. Thus, a narrowing of the claim in the area of the limitation that overcame the prior art rejection, regardless of the scope of the remaining limitations, avoids a bar by the recapture rule. To summarize, a limitation added to overcome a prior art rejection cannot be eliminated completely in a reissue claim unless it is offset by a corresponding narrowing in the same area.

In *Hester Industries Inc. v. Stein Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir.), *cert. denied*, 525 U.S. 947 (1998), the patentee eliminated completely, in a reissue application, two limitations of the original claims that were argued as distinguishing the claims over the prior art. The Federal Circuit analyzed the prosecution history of the original patent and determined that Williams, the inventor of Hester's patent, had argued that "each of these limitations was 'critical' with regard to patentability," that those arguments "constitute[d] an admission by Williams that these limitations were necessary to overcome the prior art," and that "Williams, through his admission . . . surrendered claim scope that does not include these limitations." *Id.* at 1482, 46 USPQ2d at 1649.

The Federal Circuit stated, "We share the district court's discomfort with Williams' attempt to remove, through reissue, the 'solely with steam' and 'two sources of steam' limitations after having relied so heavily on those limitations to obtain allowance of the original patent claims over the prior art," referencing the recapture rule discussed in *Clement* at 1468, 45 USPQ2d at 1164. *Hester* at 1480, 46 USPQ2d at 1647.

After determining that the reissue claims in *Hester* did include surrendered subject matter, the Federal Circuit recognized that "the recapture rule may be avoided in some circumstances." *Id.* at 1482, 46 USPQ2d at 1649. Therefore, the Federal Circuit continued its analysis by determining "whether the reissue claims were materially narrowed in other respects. *See, e.g., Mentor*, 998 F.2d at 996, 27 USPQ2d at 1525 ('Reissue claims that are broader in certain respects and narrower in others'<sup>9</sup> may avoid the effect of the recapture rule.');

*Clement*, 131 F.3d at 1470, 45 USPQ2d at 1165." *Hester* at 1482, 46 USPQ2d at 1649. The Federal Circuit found that the alleged narrowing aspects were not overlooked during the prosecution of the original patent and, therefore, that the case was not one "which involve[d] the addition of material limitations that overcome the recapture rule." *Id.* at 1483, 46 USPQ2d at 1650.

*Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001) revisited reissue recapture. In an application for patent, Pannu argued a distinction of "a continuous substantially circular arc having a diameter greater than the diameter of the lens body . . . which significantly enhance the easy insertibility of applicant's lens and significantly reduce any possibility of snagging delicate eye tissue" over the prior art. In the ensuing reissue application, Pannu eliminated that limitation from the claims, but

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<sup>9</sup> Although the Federal Circuit referred to other respects in this quote from *Mentor*, later in its opinion the Federal Circuit indicated that the other respects must relate to the limitation that was broadened. *Mentor* at 996, 27 USPQ2d at 1525. Further, the Federal Circuit in *Clement* indicated in step three of the test that they too interpreted other respects as relating to the limitation that was broadened. See step 3(a) of the *Clement* test. *Clement* at 1470, 45 USPQ2d at 1166.

further limited the size and position of the snag resistant means. The Federal Circuit stated:

The addition of the 'continuous, substantially circular arc' limitation . . . and the statements made by Pannu to the examiner during prosecution of the '855 patent limited the claim to exclude an interpretation that did not include a continuous, substantially circular arc. *See Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576, 34 USPQ2d 1673, 1676 (1995). The shape of the haptics was broadened during reissue and was the same subject matter that was surrendered during prosecution.

*Pannu* at 1371, 59 USPQ2d at 1600.

As to the narrowing aspects of the reissue claims, the Federal Circuit held that since the narrowing was related to the positioning and dimensions of the snag resistant means rather than to the shape of the haptics, "the reissued claims were not narrowed in any material respect compared with their broadening." *Id.* at 1372, 59 USPQ2d at 1601. The Federal Circuit concluded that "[i]n prosecuting the '855 patent, Pannu specifically limited the shape of the haptics to a 'continuous, substantially circular arc.' On reissue, he is estopped from attempting to recapture the precise limitation he added to overcome prior art rejections." *Id.*

In *Ex parte Eggert*, 67 USPQ2d 1716 (Bd. Pat. App. & Int. 2003), a precedential Board decision entered May 29, 2003, the majority opinion stated, "In our view, the surrendered subject matter is the outer circle of Drawing 1 [the rejected claim prior to the amendment that resulted in the claim being issued] because it is the subject matter appellants conceded was unpatentable." *Id.* at 1717. The majority further stated that "in our view" subject matter narrower than the rejected claim but broader than the patented claim is not barred by the recapture rule. *Id.* However, it acknowledged that the Federal Circuit has held that "the mere presence of narrowing limitations in the reissue claim is not necessarily sufficient to save the reissue claim from the recapture rule." *Id.* at 1729.

In analyzing the facts of the case, the majority in *Eggert* found that the reissue claims were broader than the patent claims in several respects including that they omitted

the limitation "said retaining member being generally bowl-shaped and convex toward said magnet," which defined the shape of the retaining member and which had been added to overcome a prior art rejection. *Id.* at 1731. Accordingly, it further determined that the omission of that limitation in the reissue claims was a broadening in an aspect germane to the prior art rejection. It also found that the finally rejected claim prior to the amendment that resulted in the issuance of the patent was surrendered subject matter. *Id.*

In applying the third step of the *Clement* test, determining whether the surrendered subject matter had crept back into the reissue claim, the majority opinion looked at the new limitation of reissue claim 15 that limited the shape of the retaining member to "substantially covering said outer surface of said magnet" and the new limitation of reissue claim 22 that limited the shape of the retaining member to "having a continuous outer periphery such that any two points on the periphery can be joined by a straight line segment which does not extend outside the periphery." The majority ascertained that the reissue claims were "narrower than the surrendered subject matter in an aspect germane to the prior art rejection (i.e., the shape of the retaining member) and broader only in aspects unrelated to the rejection." *Eggert* at 1731. It held that the facts of the case fell into category 3(b) of the principles set forth in *Clement*, and, therefore, that the claims were not barred by the recapture rule. While one can disagree with the *Eggert* majority as to what is meant by "surrendered subject matter," the result in *Eggert* is consistent with our reading of the case law prior to *Eggert*, i.e., *Mentor*, *Clement*, *Hester*, and *Pannu*, as discussed *supra*.<sup>10</sup>

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<sup>10</sup> We note that although the *Eggert* majority repeatedly stated that it viewed the finally rejected claim as the surrendered subject matter, the analysis of the facts focused on whether the limitation omitted had been added in the prosecution of the original application to overcome a prior art rejection and whether the narrowing limitations on reissue related to the same subject matter as the limitation omitted. Thus, despite statements in *Eggert* that could be considered inconsistent with our interpretation of the relevant case law, there is no inconsistency between our interpretation and the holding in *Eggert* as it applies to the particular facts.

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The Federal Circuit was faced once again with the issue of reissue recapture in *North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 75 USPQ2d 1545 (Fed. Cir. 2005). During the prosecution of an application for patent, the examiner rejected the claims over a combination of two references, Dechenne and Jakobsen. To overcome the rejection, the applicant limited the claims by specifying that the shape of the inner walls was generally convex. The applicant convinced the examiner that the shape of the base as amended defined over "both the Dechenne patent, wherein the corresponding wall portions 3 are slightly concave . . . and the Jakobsen patent, wherein the entire re-entrant portion is clearly concave in its entirety." *Id.* at 1340, 75 USPQ2d at 1549. After a patent issued on the amended claims, the applicant filed a reissue application including claims in which the language "inner wall portions are generally convex" was eliminated, but the language "wherein the diameter of said re-entrant portion is in the range of 5% to 30% of the overall diameter of said side wall" was added to some of the claims.

The Federal Circuit applied the three step test of *Clement*. The Federal Circuit found that the reissue claims were "broader in scope than the originally-issued claims in that they no longer require the 'inner walls' to be 'generally convex.'" *Id.* at 1350, 75 USPQ2d at 1557. Further, the broadened aspect (i.e., the broadened limitation) "relate[d] to subject matter that was surrendered during prosecution of the original-filed claims." *Id.* However, the Federal Circuit found that "the reissue claims were not narrowed with respect to the 'inner wall' limitation, thus avoiding the recapture rule." *Id.* The Federal Circuit stated, "[t]hat the reissue claims, looked at as a whole, may be of 'intermediate scope' is irrelevant. . . . [T]he recapture rule is applied on a limitation-by-limitation basis, and the applicant's deletion of the 'generally convex' limitation clearly broadened the 'inner wall' limitation." *Id.*

It is important to note that the Federal Circuit determined that the re-entrant portion (the element further narrowed in the reissue claims) was part of the inner wall. Thus, the limitation added in the reissue claims (regarding the re-entrant portion) did in

fact further limit the inner wall. Accordingly, by "'inner wall' limitation," we believe that the Federal Circuit meant the particular limitation that was broadened (that the inner wall was generally convex) in the reissue claims, not any limitation relating to the inner wall. Thus, the Federal Circuit in *North American Container* further clarified that "narrower in an aspect germane to a prior art rejection" in the *Clement* test means narrower with respect to the *specific* limitation added for patentability in the original prosecution and eliminated in the reissue claims.

In *Eggert*, the limitation added for patentability was "said retaining member being generally bowl-shaped and convex toward said magnet," whereas the narrowing was "substantially covering said outer surface of said magnet" or "having a continuous outer periphery such that any two points on the periphery can be joined by a straight line segment which does not extend outside the periphery." *Id.* at 1731. Since *North American Container* was decided after *Eggert*, and neither narrowing limitation in *Eggert* further limited the *specific* limitation added for patentability, *Eggert* is no longer consistent with the rationale of the Federal Circuit. Thus, *Eggert* should no longer be followed.

To summarize, to determine if there has been a recapture of surrendered subject matter, we apply the three step analysis set forth in *Clement*. There is disagreement as to whether or not the phrase "surrendered subject matter" includes more than merely the rejected claim prior to the amendment that overcame the prior art rejection, i.e., something relating to the added limitation. In viewing *Clement* in a vacuum, even if it could be argued that *Clement* would support multiple interpretations, as indicated *supra*, both *Mentor* and cases decided since *Clement* suggest that the Federal Circuit did, in fact, mean to include as surrendered subject matter any claim that lacks a limitation directed to the specific subject matter added in the original prosecution to overcome a prior art rejection. Thus, the proper interpretation of the applicable and binding case law is that surrendered subject matter includes any claim that lacks a limitation directed to the specific subject matter that was added to overcome a prior art rejection.

APPLICATION OF THE PERTINENT CASE LAW TO THE CLAIMS ON APPEAL

As stated in *Hester*, 46 USPQ2d at 1648, "[a]pplication of the recapture rule begins with a determination of whether and in what respect the reissue claims are broader than the original patent claims." Clearly, the claims before us are broader than the original patent claims in that they omit the limitations "at a substantially constant velocity" and "which are substantially uniformly spaced."

"Having determined that the reissue claims are broader in these respects, under the recapture rule we next examine whether these broader aspects relate to surrendered subject matter." *Id.* Appellant (Brief, page 11), by directing our attention to step 3(b) of the *Clement* test, appears to suggest that the broader aspects do not relate to surrendered subject matter, as step 3(b) states that the recapture rule does not bar the claim if the reissue claim is narrower in an aspect germane to a prior art rejection, and broader in an aspect unrelated to the rejection. Appellant explains (Reply Brief, page 4) that the broadening in the reissue claims (i.e., the removal of the limitations "at a substantially constant velocity" and "which are substantially uniformly spaced") is "unrelated to the rejection . . . since those limitations do not further distinguish the claims from the prior art, and thus are not pertinent to the original rejection." Appellant alleges (Reply Brief, page 4) that:

It is the moving of the detector relative to the object, the light pattern whose relationship remains fixed to the detector elements in the present claimed invention (not so in the prior art, in which the pattern of light moves, even of [sic] the projector does not) that are germane to the rejection and to the surrendered subject matter.

Thus, appellant concludes that according to *Clement*, the recapture rule does not bar the claims.

The facts of the present case parallel the situation in *Pannu*. Like appellant in the present case, Pannu argued that the broadening did not relate to subject matter

surrendered during prosecution. The Court in *Pannu* explained that as originally filed, none of the claims in the application limited the shape of the haptics and that Pannu filed an amendment defining the shape of the haptics after the examiner rejected the claims as obvious. Similarly, none of appellant's original claims limited the movement of the object relative to the projector to a "substantially constant velocity" nor the detector elements to be "uniformly spaced," and appellant filed an amendment adding the above-noted limitations after the examiner rejected the claims as obvious. Pannu argued to the examiner that none of the applied references taught the shape recited in the amendment. Similarly, appellant argued to the examiner that none of the applied references taught substantial constant velocity or uniform spacing. We note that appellant contends (Request for Rehearing, page 4) that "when his attorney added limitations during prosecution, [appellant] did not argue that the limitations added were 'critical' to patentability." However, the argument that the limitations were not in the references constitutes a reliance upon the limitations for patentability. The Court in *Pannu* concluded that Pannu's argument that the broadening did not relate to subject matter surrendered during prosecution was "without merit." *Pannu*, 59 USPQ2d at 1600. We likewise find appellant's arguments that the broadening did not relate to the rejection, or rather to subject matter surrendered, to be without merit.

Additionally, as explained by the Court in *Hester*, 46 USPQ2d at 1648, both amendments and arguments made to overcome prior art evidence a surrender. Here, appellant, in the amendment that resulted in issuance of the patent upon which this reissue application is based, added the limitations "at a substantially constant velocity" and "which are substantially uniformly spaced" and argued that they distinguished over the prior art. Therefore, the broadening, or omission of those limitations, is very much germane to the rejection and, thus, surrendered subject matter.

Appellant further contends (Brief, pages 10-11) that "the subject matter surrendered during prosecution of the parent application is that of the original claims," not "all claims that do not have some specific limitation added by amendment."

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Appellant (Brief, page 12) directs our attention to *In re Richman*, 409 F.2d 269, 276, 161 USPQ 359, 363-64 (CCPA 1969), and *In re Wadsworth*, 27 CCPA 735, 107 F.2d 596, 43 USPQ 460, 464 (CCPA 1939), for support of this position. Although we acknowledge the statements made by the Court in the cases cited by appellant, we disagree that those are the controlling case law. We note that although *Hester* and *Pannu* do not explicitly overrule *Richman* and *Wadsworth*, they do indicate a shift in the position of the Federal Circuit and are, therefore, controlling. Similarly, appellant (Brief, page 13) points to *Ball Corp. v. United States*, 29 F.2d 1429, 1437; 221 USPQ 289, 295 (Fed. Cir. 1984), as evidence that "[a] patentee may obtain a reissue claim that varies materially from a claim originally surrendered even though it omits a limitation added to obtain issuance." However, as noted *supra*, there is a suggestion from the analysis that there must be a narrowing that relates to that omitted limitation. In addition, although *Ex Parte Eggert*, 67 USPQ2d 1716 (Bd. Pat App & Int. 2003), (not argued by appellant) would appear to support appellant's position, *Eggert* differs from the present case in that the limitation added for patentability was broadened, not deleted, in the reissue claims. Therefore, we do not view *Eggert* as dispositive of the issues in the present case. Further, as noted *supra*, *Eggert* is not consistent with the current rationale of the Federal Circuit and should no longer be followed.

As explained *supra*, in the original application for patent, appellant added three limitations to the claims and argued how each limitation differed from the prior art applied against the claims. In other words, appellant's statements to the contrary (Request for Rehearing, page 4) notwithstanding, appellant argued that the added limitations were critical to patentability. In *Hester*, Williams (the inventor) likewise had argued that two limitations were critical with regard to patentability. The Court held that those arguments "constitute[d] an admission by Williams that these limitations were necessary to overcome the prior art," and that "Williams, through his admission . . . surrendered claim scope that does not include these limitations." *Hester*, 46 USPQ2d at

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1649. Similarly, in *Pannu*, where a limitation added to overcome a prior art rejection was removed in a reissue application, The Court stated:

The addition of the 'continuous, substantially circular arc' limitation . . . and the statements made by Pannu to the examiner during prosecution of the '855 patent limited the claim to exclude an interpretation that did not include a continuous, substantially circular arc. *See Southwall Techs., Inc. v. Cardinal AG Co.*, 54 F.3d 1570, 1576, 34 USPQ2d 1673, 1676 (1995). The shape of the haptics was broadened during reissue and was the same subject matter that was surrendered during prosecution.

*Pannu*, 59 USPQ2d at 1600. Thus, according to the recent case law, the subject matter surrendered is any claim that does not include the limitations added during the prosecution of the original patent application.

We note that the Court in *Pannu*, *Hester*, and *North American Container* recognized that after determining what subject matter was surrendered they still needed to consider whether the claims were materially narrowed in other respects. *See Hester*, 46 USPQ2d at 1649, and *Pannu*, 59 USPQ2d at 1601. Accordingly, having determined that the subject matter surrendered is all claims which do not include the limitations of (1) that the object moves relative to the projector "at a substantially constant velocity," and (2) that the detector elements "are substantially uniformly spaced," we must consider whether the claims have been materially narrowed. Appellant argues two limitations are materially narrower than the patent claims.

First, appellant asserts (Brief, page 10) that the reissue claims "are substantially narrower in a manner directly material to the rejection AND are different than those claims surrendered in Applicant's amendment in the parent application, and distinguish from the art overcome in the parent application." Specifically, appellant (Brief, pages 11-12 and 15) asserts that claim 30, for example, images the same area of the object onto first, second, and third detector elements at first, second, and third phases, respectively, of the pattern of light. Appellant urges that this is:

narrower and germane to the rejection because the prior art references kept the object and the detector in a fixed relationship and moved the projected light, thus the same area of the object always imaged to the same detector at each different phase of the light as the light moved. Thus the reissue claims distinguish over the prior art in a manner germane to the rejection.

Second, appellant argues (Brief, pages 14-15, Reply Brief, page 3, and Request for Rehearing, page 4) that "maintaining the projected pattern of light and the detector in a substantially fixed relation to each other," rather than the projector and the detector, narrows the claims in a manner germane to the original rejection, thereby distinguishing over the situation in *Pannu*.

Regarding the imaging of the detector elements onto three detector elements at first, second, and third phases, respectively, despite appellant's arguments to the contrary, we find that this limitation does not further narrow patent claim 1. Specifically, claim 1 recited "a plurality of separate detector elements which are substantially uniformly spaced," which implies that there are at least three detector elements (or the spacing limitation makes no sense). Further, claim 1 recited that "each of the detector elements produce [sic] an image having a different phase of the same scanned surface." Thus, claim 1 included imaging the same surface onto three detector elements, each at a different phase. Merely stating the limitation a different way does not constitute a narrowing of the claim. Accordingly, we find no material narrowing regarding the imaging onto the detector elements at different phases.

As to "maintaining the projected pattern of light and the detector in a substantially fixed relation to each other," this limitation does not relate to either the velocity of the object relative to the projector nor to the spacing of the detector elements, the two limitations that were broadened. Similarly, the imaging limitation discussed *supra* does not relate to either of the broadening limitations. Accordingly, "the reissued claims were not narrowed in any material respect compared with their broadening." *Pannu*, 59

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USPQ2d at 1601. Consequently, we find that there has been no material narrowing to avoid the recapture rule, and, thus, the rejection should be affirmed.

AFFIRMED

JOSEPH F. RUGGIERO  
Administrative Patent Judge

ANITA PELLMAN GROSS  
Administrative Patent Judge

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Judge MacDonald, with whom Judge Jerry Smith joins, concurring.

A. DISCUSSION

1. RECAPTURE PRINCIPLES

(1)

THE STATUTE

The reissue statute expressly permits a patentee to correct an error thus permitting patentee to obtain reissue claims broader than the originally issued patent claims at any time within two (2) years from the date the original patent issues. More particularly, 35 U.S.C. § 251, ¶¶ 1 and 4, provide in pertinent part:

Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the Director shall, on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent.

No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

(2)

RECAPTURE IS NOT AN ERROR  
WITHIN THE MEANING OF 35 U.S.C. § 251

What has become known as the “recapture rule,” prevents a patentee from regaining through a reissue patent subject matter that the patentee surrendered in an effort to obtain allowance of claims in the patent sought to be reissued. *In re Clement*, 131 F.3d 1464, 1468, 45 USPQ2d 1161, 1164 (Fed. Cir. 1997).

If a patentee attempts to “recapture” what the patentee previously surrendered in order to obtain allowance of original patent claims, that “deliberate withdrawal or amendment ... cannot be said to involve the inadvertence or mistake contemplated by 35 U.S.C. § 251, and is not an error of the kind which will justify the granting of a reissue patent which includes the [subject] matter withdrawn.” *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 995, 27 USPQ2d 1521, 1524 (Fed. Cir. 1993), quoting from *Haliczer v. United States*, 356 F.2d 541, 545, 148 USPQ 565, 569 (Ct. Cl. 1966).<sup>4</sup> *See also Hester Industries Inc. v. Stein, Inc.*, 142 F.3d 1472, 1480, 46 USPQ2d 1641, 1647 (Fed. Cir.), *cert. denied*, 525 U.S. 947 (1998).

(3)  
IN RE CLEMENT

The Federal Circuit’s opinion in *Clement* discusses a three-step test for analyzing recapture.

Step 1 involves a determination of whether and in what aspect any claims sought to be reissued are broader than the patent claims. The Federal Circuit reasoned that a reissue application claim deleting a limitation or element from a patent claim is broader as to that limitation’s or element’s aspect. 131 F.3d at 1468, 45 USPQ2d at 1164.

Step 2 involves a determination of whether the broader aspects of the reissue application claims relate to surrendered subject matter. 131 F.3d at 1468-69, 45 USPQ2d at 1164. In this respect, review of arguments and/or amendments during the prosecution history of the application, which matured into the patent sought to be reissued, is appropriate. In reviewing the prosecution history, the Federal Circuit observed that “[d]eliberately canceling or amending a claim in an effort to overcome a [prior art] reference strongly suggests that the applicant admits that the scope of the claim before cancellation or amendment is unpatentable.” 131 F.3d at 1469, 45 USPQ2d at 1164.

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<sup>4</sup> *Haliczer* is binding precedent. *See South Corp. v. United States*, 690 F.2d 1368, 215 USPQ 657 (Fed. Cir. 1982) (in banc) (decisions of the former U.S. Court of Customs and Patent Appeals and former U.S. Court of Claims decisions are binding precedent).

Step 3 is applied when the broadening relates to surrendered subject matter and involves a determination whether the surrendered subject matter has crept into the reissue application claim. *Id.* The following principles were articulated by the Federal Circuit, 131 F.3d at 1470, 45 USPQ2d at 1165:

Substep (1): if the reissue claim is as broad as or broader than the canceled or amended claim in all aspects, the recapture rule bars the claim;

Substep (2): if it is narrower in all aspects, the recapture rule does not apply, but other rejections are possible;

Substep (3): if the reissue claim is broader in some aspects, but narrower in others, then:

(a) if the reissue claim is as broad as or broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim;

(b) if the reissue claim is narrower in an aspect germane to [a] prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim, but other rejections are possible.

(4)

#### NORTH AMERICAN CONTAINER

In *North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 75 USPQ2d 1545 (Fed. Cir. 2005), the Federal Circuit had occasion to further address Substep (3)(a) of *Clement*.

*North American Container* involved a reissue patent, which had been held invalid by the U.S. District Court for the Northern District of Texas. The district court bottomed its invalidity holding based on a violation of the recapture rule. During prosecution of an application for patent, an examiner rejected the claims over a combination of two prior art references: Dechenne and Jakobsen. To overcome the rejection, North American Container limited its application claims by specifying that a shape of “inner walls” of a base of a container was “generally convex.” North American Container convinced the

examiner that the shape of the base, as amended, defined over “both the Dechenne patent, wherein the corresponding wall portions 3 are slightly concave ... and the Jakobsen patent, wherein the entire reentrant portion is clearly concave in its entirety.” 415 F.3d at 1340, 75 USPQ2d at 1549. After a patent issued containing the amended claims, North American Container filed a reissue application seeking reissue claims in which (1) the language “inner wall portions are generally convex” was eliminated, but (2) the language “wherein the diameter of said re-entrant portion is in the range of 5% to 30% of the overall diameter of said side wall” was added. Thus, the claim sought be reissued was broader in some aspects and narrower in other aspects.

The Federal Circuit, applying the *Clement* three-step test, held that the reissue claims were broader in scope than the originally-issued claims in that they no longer require the “inner walls” to be “generally convex.” The Federal Circuit further found that the broadened aspect (i.e., the broadened limitation) “relate[d] to subject matter that was surrendered during prosecution of the original-filed claims.” 415 F.3d at 1350, 75 USPQ2d at 1557. The Federal Circuit observed “the reissue claims were not narrowed with respect to the ‘inner wall’ limitation, thus avoiding the recapture rule.” The Federal Circuit stated:

[t]hat the reissue claims, looked at as a whole, may be of “intermediate scope” is irrelevant. . . . [T]he recapture rule is applied on a limitation-by-limitation basis, and ... [North American Container’s] deletion of the “generally convex” limitation clearly broadened the “inner wall” limitation.

*Id.* Thus, the Federal Circuit in *North American Container* further developed the principles of Substep (3)(a) of *Clement*: “broader in an aspect germane to a prior art rejection” means broader with respect to a specific limitation (1) added to overcome prior art in prosecution of the application which matured into the patent sought to be reissued and (2) eliminated in the reissue application claims.

(5)  
EX PARTE EGGERT

Our opinion in *Ex parte Eggert*, 67 USPQ2d 1716 (Bd. Pat. App. & Int. 2003), issued as a precedential opinion, is also part of the recapture precedent applicable to proceedings before the United States Patent & Trademark Office (USPTO). *Eggert* was entered on May 29, 2003, prior to the Federal Circuit's *North American Container* decision. In *Eggert*, the majority stated that “[i]n our view, the surrendered subject matter is the outer circle of Drawing 1 [the rejected claim prior to the amendment that resulted in the claim being issued] because it is the subject matter appellants conceded was unpatentable.” 67 USPQ2d at 1717. The majority further held that “in our view” subject matter narrower than the rejected claim but broader than the patented claim is not barred by the recapture rule. *Id.* The majority explained that if the finally rejected claim was ABC and the patent claim was ABCDEF, there would be recapture for ABC or anything broader than ABC, but not for claims directed to ABCX, ABCD<sub>Br</sub>, ABCEF, or A<sub>Br</sub>BCDEF, because those claims would be narrower than the finally rejected claim ABC. 67 USPQ2d at 1717. In its opinion, the majority recognized that the Federal Circuit had held that “the mere presence of narrowing limitations in the reissue claim is not necessarily sufficient to save the reissue claim from the recapture rule.” 67 USPQ at 1729.

Board of Patent Appeals and Interferences Standard Operating Procedure 2 (Revision 6) (August 10, 2005) mandates that a published precedential opinion of the Board is binding on all judges of the Board *unless* the views expressed in an opinion in support of the decision, among a number of things, are inconsistent with a decision of the Federal Circuit. In our view, the majority view in *Eggert* is believed to be inconsistent with the subsequent Federal Circuit decision in *North American Container* with respect to the principles governing application of Substep (3)(a) of *Clement*.

The *Eggert* majority's analysis is believed to be consistent with *North American Container* in that the majority applied the three-step framework analysis set forth in

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applicable Federal Circuit opinions, e.g., (1) *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 1370-71, 59 USPQ2d 1597, 1600 (Fed. Cir. 2001); (2) *Clement*, 131 F.3d at 1470, 45 USPQ2d at 1165 and (3) *Hester*, 142 F.3d at 148, 46 USPQ2d at 1648-49. However, the *Eggert* majority also held that the surrendered subject matter was the rejected claim only rather than the amended portion of the issued claim. 67 USPQ2d at 1717. At a similar point in the recapture analysis, *North American Container* has clarified the application of the three-step framework analysis. *North American Container* holds that the “inner walls” limitation (a portion of the issued claim that was added to the rejected claim by amendment) was “subject matter that was surrendered during prosecution of the original-filed claims.” 415 F.3d at 1350, 75 USPQ2d at 1557.

It is believed that the Substep (3)(a) rationale of the *Eggert* majority (1) is not consistent with the rationale of the Federal Circuit in *North American Container* and (2) should no longer be followed or be applicable to proceedings before the USPTO.

(6)  
WHAT SUBJECT MATTER IS SURRENDERED?

In a case involving Substep (3)(a) of *Clement*, what is the subject matter surrendered?

Is it

- (1) the subject matter of an application claim which was amended or canceled or
- (2) the subject matter of an application claim which was amended or canceled and, on a limitation-by-limitation basis, the territory falling between the scope of
  - (a) the application claim which was canceled or amended and
  - (b) the patent claim which was ultimately issued?

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We believe *North American Container* stands for the proposition that it is (2) and not (1). Accordingly, we hold that it is (2).

(7)

#### CLEMENT PRINCIPLES ARE NOT PER SE RULES

Our reading of our appellate reviewing court's recapture opinions, as a whole, suggests that the *Clement* steps should not be viewed as *per se* rules. For example, we note the following in *Clement*, 131 F.3d at 1469, 45 USPQ2d at 1164:

Although the recapture rule does not apply in the absence of evidence that the applicant's amendment was "an admission that the scope of that claim was not in fact patentable," *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984), "the court may draw inferences from changes in claim scope when other reliable evidence of the patentee's intent is not available," *Ball [Corp. v. United States]*, 729 F.2d at 1436, 221 USPQ at 294. Deliberately canceling or amending a claim in an effort to overcome a reference strongly suggests that the applicant admits that the scope of the claim before the cancellation or amendment is unpatentable, but it is not dispositive because other evidence in the prosecution history may indicate the contrary. *See Mentor [Corp. v. Coloplast, Inc.]*, 998 F.2d at 995-96, 27 USPQ2d at 1524-25; *Ball*, 729 F.2d at 1438, 221 USPQ at 296; *Seattle Box Co.*, 731 F.2d at 826, 221 USPQ at 574 (declining to apply the recapture rule in the absence of evidence that the applicant's "amendment ... was in any sense an admission that the scope of [the] claim was not patentable"); *Haliczer [v. United States]*, 356 F.2d at 545, 148 USPQ at 569 (acquiescence in the rejection and acceptance of a patent whose claims include the limitation added by the applicant to distinguish the claims from the prior art shows intentional withdrawal of subject matter); *In re Willingham*, 282 F.2d 353, 354, 357, 127 USPQ 211, 213, 215 (CCPA 1960) (no intent to surrender where the applicant canceled and replaced a claim without an intervening action by the examiner). Amending a claim "by the inclusion of an additional limitation [has] exactly the same effect as if the claim as originally presented had been canceled and replaced by a new claim including that limitation." *In re Byers*, 230 F.2d 451, 455, 109 USPQ 53, 55 (CCPA 1956). [Footnote and citations to the CCPA reports omitted.]

(8)  
ALLOCATION OF BURDEN OF PROOF

What is the proper allocation of the burden of proof in *ex parte* examination?

For reasons that follow, we hold that an examiner has the burden of making out a *prima facie* case of recapture. The examiner can make out a *prima facie* case of recapture by establishing that the claims sought to be reissued fall within Substeps (1) or 3(a) of *Clement*.

For reasons that follow, we also hold that once a *prima facie* case of recapture is established, the burden of persuasion then shifts to the applicant to establish that the *prosecution history* of the application, which matured into the patent sought to be reissued, establishes that a surrender of subject matter did not occur.

As will become apparent, our rationale parallels practice in determining whether subject matter is surrendered when a doctrine of equivalents analysis occurs in infringement cases.

(9)  
BURDEN OF PROOF ANALYSIS

Our analysis begins with an observation made by our appellate reviewing court in *Hester*, 142 F.3d at 1481-82, 46 USPQ2d at 1649:

[A]s recognized in *Ball*, the recapture rule is based on principles of equity<sup>5</sup> and therefore embodies the notion of estoppel. 729 F.2d at 1439, 221 USPQ at 296. Indeed, the recapture rule is quite similar to prosecution history estoppel, which prevents the application of the doctrine of equivalents in a manner contrary to the patent's prosecution history. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, [520 U.S. 17, 33] 117 S. Ct. 1040, 1051[41 USPQ2d 1865, 1873] (1997). Like the recapture rule, prosecution history estoppel prevents a patentee from regaining subject matter surrendered during prosecution in support of patentability. See *id.*

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<sup>5</sup> The reissue statute has been characterized as being remedial in nature, based on fundamental principles of equity and fairness and should be construed liberally. *In re Bennett*, 766 F.2d 524, 528, 226 USPQ 413, 416 (Fed. Cir. 1985) (in banc); *In re Willingham*, 282 F.2d 353, 354-55, 127 USPQ 211, 214 (CCPA 1960). Nevertheless,

Hester argues that an analogy cannot be made with prosecution history estoppel because the reissue procedure and prosecution history estoppel are the antithesis of one another--reissue allows an expansion of patent rights whereas prosecution history estoppel is limiting. However, Hester's argument is unpersuasive. The analogy is not to the broadening aspect of reissue. Rather, the analogy is with the recapture rule, which restricts the permissible range of expansion through reissue just as prosecution history estoppel restricts the permissible range of equivalents under the doctrine of equivalents.

This court earlier concluded that prosecution history estoppel can arise by way of unmistakable assertions made to the Patent Office in support of patentability, just as it can arise by way of amendments to avoid prior art. *See, e.g., Texas Instruments, Inc. v. International Trade Comm'n*, 998 F.2d 1165, 1174, 26 USPQ2d 1018, 1025 (Fed. Cir. 1993).

*See also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 602, 56 USPQ2d 1865, 1899 (Fed. Cir. 2000) (Festo I), *vacated and remanded*, 535 U.S. 722, 122 S. Ct. 1831, 62 USPQ2d 1705 (2002) (Festo II)<sup>6</sup> (Michel, J., concurring-in-part and dissenting-in-part):

[T]he law of prosecution history estoppel has developed with equal applicability to reissue patents and original patents whose claims were amended during prosecution. By at least 1879, the Supreme Court recognized that the process of obtaining a reissue patent precluded the patentee from recapturing that which he had disclaimed (i.e., surrendered), through the reissuance process.

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fairness to the public must also be considered. As stated in *Mentor*, "the reissue statement cannot be construed in such a way that competitors, properly relying on prosecution history, become patent infringers when they do so." 998 F.2d at 996, 27 USPQ2d at 1525.

<sup>6</sup> The "Festo" convention used in this opinion is:

Festo I is the original in banc decision of the Federal Circuit.

Festo II is the decision of the Supreme Court.

Festo III is the decision of the Federal Circuit on remand.

(10)  
RELEVANCE OF PROSECUTION HISTORY

“Surrendered subject matter” is defined in connection with prosecution history estoppel in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733-34, 122 S. Ct. 1831, 1838, 62 USPQ2d 1705, 1710-11 (2002) (Festo II):

The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes. When, however, the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent. On the contrary, “[b]y the amendment [the patentee] recognized and emphasized the difference between the two phrases[,] ... and [t]he difference which [the patentee] thus disclaimed must be regarded as material.” *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 136-37, 62 S. Ct. 513, 518-19 [52 USPQ 275, 279-80] (1942).

Festo II goes on to comment, 535 U.S. at 737-41, 122 S. Ct. at 1840-42, 62 USPQ2d at 1712-14:

[Prosecution history estoppel’s] reach requires an examination of the subject matter surrendered by the narrowing amendment. [A] complete bar [would avoid] this inquiry by establishing a *per se* rule; but that approach is inconsistent with the purpose of applying the estoppel in the first place to hold the inventor to the representations made during the application process and to the inferences that *may reasonably* be drawn from the amendment (emphasis added).

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A patentee’s decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim. *Exhibit Supply*, 315 U.S., at 136-137, 62 S. Ct. 513 (“By the amendment [the patentee] recognized and emphasized the difference between the two phrases and proclaimed his abandonment

of all that is embraced in that difference”). There are some cases, however, where the amendment *cannot reasonably be viewed as surrendering* a particular equivalent. The equivalent may have been unforeseeable at the time of the application; the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. In those cases *the patentee can overcome the presumption* that prosecution history estoppel bars a finding of equivalence (emphasis added).

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When the patentee has chosen to narrow a claim, *courts may presume* the amended text was composed with awareness of this rule and that the territory surrendered is not an equivalent of the territory claimed. In those instances, however, *the patentee still might rebut the presumption* that estoppel bars a claim of equivalence. The patentee must show that at the time of the amendment one skilled in the art *could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent* (emphasis added).

The same policy considerations that prevent a patentee from urging equivalents within what the Supreme Court refers to as “surrendered territory” should *prima facie* prohibit the patentee from being able to claim subject matter within the surrendered territory in reissue. Accordingly, the “surrendered subject matter” that may not be recaptured through reissue should be *presumed* to include subject matter broader than the patent claims in a manner directly related to (1) limitations added to the claims by amendment (either by amending an existing claim or canceling a claim and replacing it with a new claim with that limitation) to overcome a patentability rejection and (2) limitations argued to overcome a patentability rejection without amendment of a claim. These presumptions are believed to place practical and workable burdens on examiners and applicants.

(11)  
ADMISSIBLE EVIDENCE IN REBUTTAL SHOWING

As in the case of surrender when applying the doctrine of equivalents, a reissue applicant should have an opportunity to rebut any *prima facie* case made by an examiner.

What evidence may an applicant rely on to rebut any *prima facie* case of recapture?

We hold that the admissible rebuttal evidence generally should be limited to (1) the prosecution history of the application which matured into the patent sought to be reissued and (2) showings related to what was known by a person having ordinary skill in the art at the time an amendment was made. Nevertheless, we cannot attempt to divine, at this time, all evidence that might be relevant. As with other issues that come before the USPTO, such as obviousness and enablement, the evidence to be presented will vary on a case-by-case basis, as will the analysis of that evidence.

An applicant must show that at the time the amendment was made, one skilled in the art could not reasonably have viewed the subject matter broader than any narrowing amendment as having been surrendered. The showing required to be made by applicant is consistent with the public notice function of claims. Nevertheless, some limited extrinsic evidence may be relevant. However, extrinsic evidence unavailable to one of ordinary skill in the art at the time of the amendment is not relevant to showing that one skilled in the art could not reasonably have viewed the subject matter as having been surrendered. Limiting the nature of the admissible evidence is believed to be consistent with the Federal Circuit's decision on remand following *Festo II*. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1367, 68 USPQ2d 1321, 1326 (Fed. Cir. 2003), *cert. denied*, 541 U.S. 988 (2004) (*Festo III*).

On remand, the Federal Circuit notes (*Id.* at 1367-70, 68 USPQ2d at 1326-29):

[W]e reinstate our earlier holding that a patentee's rebuttal of the *Warner-Jenkinson* presumption is restricted to the evidence in the prosecution

history record. *Festo* [I], 234 F.3d at 586 & n.6; see also *Pioneer Magnetics*, 330 F.3d at 1356 (stating that only the prosecution history record may be considered in determining whether a patentee has overcome the *Warner-Jenkinson* presumption, so as not to undermine the public notice function served by that record). If the patentee successfully establishes that the amendment was not for a reason of patentability, then prosecution history estoppel does not apply.

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. . . By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment. Therefore, in determining whether an alleged equivalent would have been unforeseeable, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries.

. . . As we have held in the *Warner-Jenkinson* context, that reason should be discernible from the prosecution history record, if the public notice function of a patent and its prosecution history is to have significance. *See id.* at 1356 (“Only the public record of the patent prosecution, the prosecution history, can be a basis for [the reason for the amendment to the claim]. Otherwise, the public notice function of the patent record would be undermined.”); *Festo* [I], 234 F.3d at 586 (“In order to give due deference to public notice considerations under the *Warner-Jenkinson* framework, a patent holder seeking to establish the reason for an amendment must base his arguments solely upon the public record of the patent’s prosecution, *i.e.*, the patent’s prosecution history. To hold otherwise--that is, to allow a patent holder to rely on evidence not in the public record to establish a reason for an amendment--would undermine the public notice function of the patent record.”). Moreover, whether an amendment was merely tangential to an alleged equivalent necessarily requires focus on the context in which the amendment was made; hence the resort to the prosecution history. Thus, whether the patentee has established a merely tangential reason for a narrowing amendment is for the court to determine from the prosecution history record without the introduction of additional evidence, except, when necessary, testimony from those skilled in the art as to the interpretation of that record.

. . . When at all possible, determination of the third rebuttal criterion should also be limited to the prosecution history record. . . . We need not decide now what evidence outside the prosecution history record, if any,

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should be considered in determining if a patentee has met its burden under this third rebuttal criterion.

We interpret *Festo III* to generally, perhaps effectively, limit the admissible rebuttal evidence to the prosecution history record and extrinsic evidence related to the knowledge of the hypothetical person of ordinary skill in the art at the time of the amendment. Admitting evidence not available to the public, such as an affidavit of an attorney giving mental impressions from the attorney who made the amendment, would undermine the public notice function of the patent and its prosecution history.

(12)

#### NON-RELEVANCE OF “INTERVENING RIGHTS”

We have not overlooked a possibility that an argument might be made that the so-called intervening rights provision relating to reissues makes jurisprudence on the doctrine of equivalents presumption inapplicable to reissue recapture rules. Our answer as to the argument is similar to the answer given by the Federal Circuit in *Hester* with respect to whether the doctrine of equivalents surrender principles have any applicability to reissue surrender principles. *Hester* squarely held that they do. Moreover, mixing “intervening rights” with “surrender” is like mixing apples with oranges or putting the cart before the horse. A patentee seeking a reissue claim which is barred by recapture is not entitled to a reissue patent under 35 U.S.C. § 251. If there is no reissue patent, there can be no intervening rights.

(13)

#### PUBLIC NOTICE

We believe that any recapture analysis must be bottomed principally on a “public notice” analysis that can occur only after a record becomes “fixed.” In the case of a patent, the “claims” and the “prosecution history” become fixed at the time the patent is issued--not during “fluid” patent prosecution where claims and arguments can change

depending on the circumstances, *e.g.*, prior art applied and amendments to claims. It is from a fixed perspective that the public (not the patentee) must make an analysis of what the patentee surrendered during prosecution. Moreover, an applicant (not the public) controls what arguments and amendments are presented during prosecution. When an argument or amendment is presented, it is the applicant that should be in the best position to analyze what subject matter (*i.e.*, territory to use the Supreme Court's language) is being surrendered.

## 2. THE EXAMINER'S PRIMA FACIE CASE

Our finding of fact 45 sets out the basis upon which the examiner made a recapture rejection. As noted in Finding 47, the record supports the Examiner's findings.

In the application which matured into the patent now sought to be reissued, the examiner "rejected" originally filed claims 1-27, as noted in findings of fact 20-26. Applicant proceeded to amend independent application claims 1 and 14. Claims 1-27 issued as renumbered patent claims 1-27 (Finding 33).

The method and system of the original claims rejected by the examiner based on prior art did not contain certain limitations:

**Limitation A:** moving . . . "at a substantially constant velocity" --found in patent claims 1 and 14, but not original application claims 1 and 14.

**Limitation B:** separate detector elements "which are substantially uniformly spaced" --found in patent claims 1 and 14, but not original application claims 1 and 14.

**Limitation C:** the detectors in "a substantially" fixed relation to each other --found in patent claims 1 and 14, but not original application claims 1 and 14.

Because limitations **A**, **B**, and **C** are absent from the reissue claims being rejected and since those limitations are germane as to why the prior art did not reach claims containing

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limitations **A**, **B**, and **C**, the examiner has correctly placed the claims sought to be reissued within Substep (3)(a) of Step (3) of *Clement*.

As the examiner accurately notes, with respect to reissue application claims 30 through 85:

There is no question that the new [re-issue] claims are broader than the patent claims due to the elimination of 1) the relative movement being “at a substantially constant velocity” and 2) the detector elements being “substantially uniformly spaced” limitations, that are present in the [patent] claims. [Examiner’s Answer, page 5]

The Examiner’s accurate factual analysis demonstrates that the examiner has made out a *prima facie* case of recapture.

3. APPLICANT’S RESPONSE TO THE EXAMINER’S CASE  
(1) ARGUMENTS OF APPEAL BRIEF FILED MARCH 17, 2003

In the Appeal Brief filed March 17, 2003, Appellant cites numerous authorities for the proposition that he is not precluded from broadening a limitation added to a claim in obtaining its allowance. We agree that Appellant is not precluded, so long as Appellant shows that at the time the amendment was made, one skilled in the art could not reasonably have viewed the subject matter broader than any narrowing amendment as having been surrendered. As we have already fully discussed *supra*, Appellant is free to rebut the presumption of surrender based on evidence generally limited to (1) the prosecution history of the application which matured into the patent sought to be reissued and (2) showings related to what was known by a person having ordinary skill in the art at the time an amendment was made. Appellant has not favored us with such rebuttal argument and evidence in the record before us.

Appellant also argues at page 10 of the brief, “[t]he subject matter surrendered during prosecution of the parent application is that of the original claims.” We disagree with such a *per se* rule.

An argument that only the subject matter of a rejected claim can be viewed, as surrendered territory appears to be inconsistent with sound public policy made apparent by binding Supreme Court and Federal Circuit precedent. Rather than applying a *per se* rule, we believe that the proper inquiry requires a factual analysis on a case-by-case basis to determine whether the patentee is attempting to recapture by reissue subject matter surrendered during the prosecution of the patent application.

We note that at the oral hearing on June 27, 2006, appellant argued:

- 1) limitation **A** is in the prior art and thus could not reasonably be viewed as surrendered;
- 2) limitation **B** is in the prior art and thus could not reasonably be viewed as surrendered; and
- 3) limitation **C** is actually a broadening of the claim rather than a narrowing and thus could not reasonably be viewed as surrendered.

However, while we view this type of argument as directly on point to the issue before us, Appellant provided no evidence in support of the oral arguments, nor do such arguments and supporting evidence appear in the briefs. This last point is critical as 37 C.F.R. § 41.47(e)(1) requires “at the oral hearing, appellant may only rely on evidence that has been previously entered and considered by the primary examiner and present argument that has been relied upon in the brief or reply brief except as permitted by paragraph (e)(2) of this section.”

(2) ARGUMENTS OF REPLY BRIEF FILED OCTOBER 8, 2003

Appellant, at page 4 of the Reply Brief filed October 8, 2003, argues:

The aspect of the present claim that is unrelated to the rejection are the limitations insisted to by the Examiner “at a substantially constant velocity” and “which are

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substantially uniformly spaced” and [projector and detector in a] “substantially fixed relationship to one another” since those limitations do not further distinguish the claims from the prior art, and thus are not pertinent to the original rejection.

We disagree. Our findings of fact 27-31 set out the amendments and statements made by appellant in response to the Examiner’s rejection of the originally filed claims. As noted in Finding 31, appellant specifically cited the importance of the same three limitations now “insisted to by the Examiner.”

As with limitation **A**, limitation **B**, and limitation **C**, appellant does not favor us with any showing that at the time the amendment was made, one skilled in the art could not reasonably have viewed the subject matter broader than appellant’s statement on the record (Finding 31) as having been surrendered.

### (3) OTHER ARGUMENTS

We have considered all other arguments made by appellant in the Appeal Brief and subsequent Briefs. None has convinced us that the Examiner erred in rejecting reissue claims 30 through 85 based on recapture.

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B. DECISION

Upon consideration of the record, and for the reasons given, the decision of the examiner rejecting reissue claims 30 through 85 based on recapture is affirmed.

AFFIRMED

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JERRY SMITH	)	
Administrative Patent Judge	)	BOARD OF PATENT
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ALLEN R. MacDONALD	)	INTERFERENCES
Administrative Patent Judge	)	
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GARRIS, Administrative Patent Judge, concurring.

I agree with the majority's decision to affirm the rejection of claims 30 through 85 under 35 U.S.C. § 251 based on recapture. Particularly in light of the correspondence between the recapture pertinent facts in this appeal and those in *Pannu v. Storz Instruments, Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001), this affirmance is appropriate as fully explained in the majority opinion.

I write separately to express my disagreement with certain statements made by the majority which are unnecessary for resolution of this appeal and which are contrary to binding decisional and statutory authority.

On page 27 of this decision, the majority states "the proper interpretation of the applicable and binding case law is that surrendered subject matter includes any claim that lacks a limitation directed to the specific subject matter that was added to overcome a prior art rejection." This definition of surrendered subject matter is proper under appropriate factual circumstances such as those of the instant appeal. *See Pannu, id.* However, when read in context, this statement clearly reflects the majority's position that it is not proper under any circumstances to define surrendered subject matter vis-à-vis the recapture rule in terms of a claim which has been canceled or amended in order to avoid a rejection.

This position is erroneous.

The binding precedent of our present and past reviewing courts includes numerous decisions which define surrendered subject matter in terms of a claim that had been canceled or amended to avoid a rejection. For example: *See In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984); *In re Richman*, 409 F.2d 269, 161 USPQ 359 (CCPA 1969); *In re Byers*, 230 F.2d 451, 109 USPQ 53 (CCPA 1956); *In re Wadsworth*, 107 F.2d 596, 43 USPQ 460 (CCPA 1939). The majority has contradicted this binding

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precedent, and potentially the broadening provision of 35 U.S.C. § 251, in taking the position that such a definition is no longer proper under any circumstances. Until and unless our reviewing court holds otherwise, this definition of surrendered subject matter should be applied under appropriate factual circumstances.

On page 33 of this decision, the majority properly determines that “there has been no material narrowing [of the appealed reissue claims] to avoid the recapture rule.” However, the paragraph which contains this statement suggests that the majority believes the recapture rule may be avoided only if a material narrowing relates to the subject matter (i.e., a limitation of the original patent claims) which was broadened.

This belief is incorrect.

It is well established that the recapture rule may be avoided by a narrowing in aspects unrelated to the broadening aspects. *See In re Clement*, 131 F.3d 1464, 1469-70, 45 USPQ2d 1161, 1165 (Fed. Cir. 1997) and *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 996, 27 USPQ2d 1521, 1525 (Fed. Cir. 1993). As explained in *Hester Indus., Inc. v. Stein, Inc.*, 142 F.3d 1472, 1482-83, 46 USPQ2d 1641, 1649-50 (Fed. Cir. 1998):

[T]his principal, in appropriate cases, may operate to overcome the recapture rule when the reissue claims are materially narrower in other overlooked aspects of the invention. The purpose of this exception to the recapture rule is to allow the patentee to obtain through reissue a scope of protection to which he is rightfully entitled for such overlooked aspects.

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In summary, I disagree with the above discussed positions of the majority but concur with the decision to affirm the Section 251 rejection under review.

AFFIRMED

BRADLEY R. GARRIS

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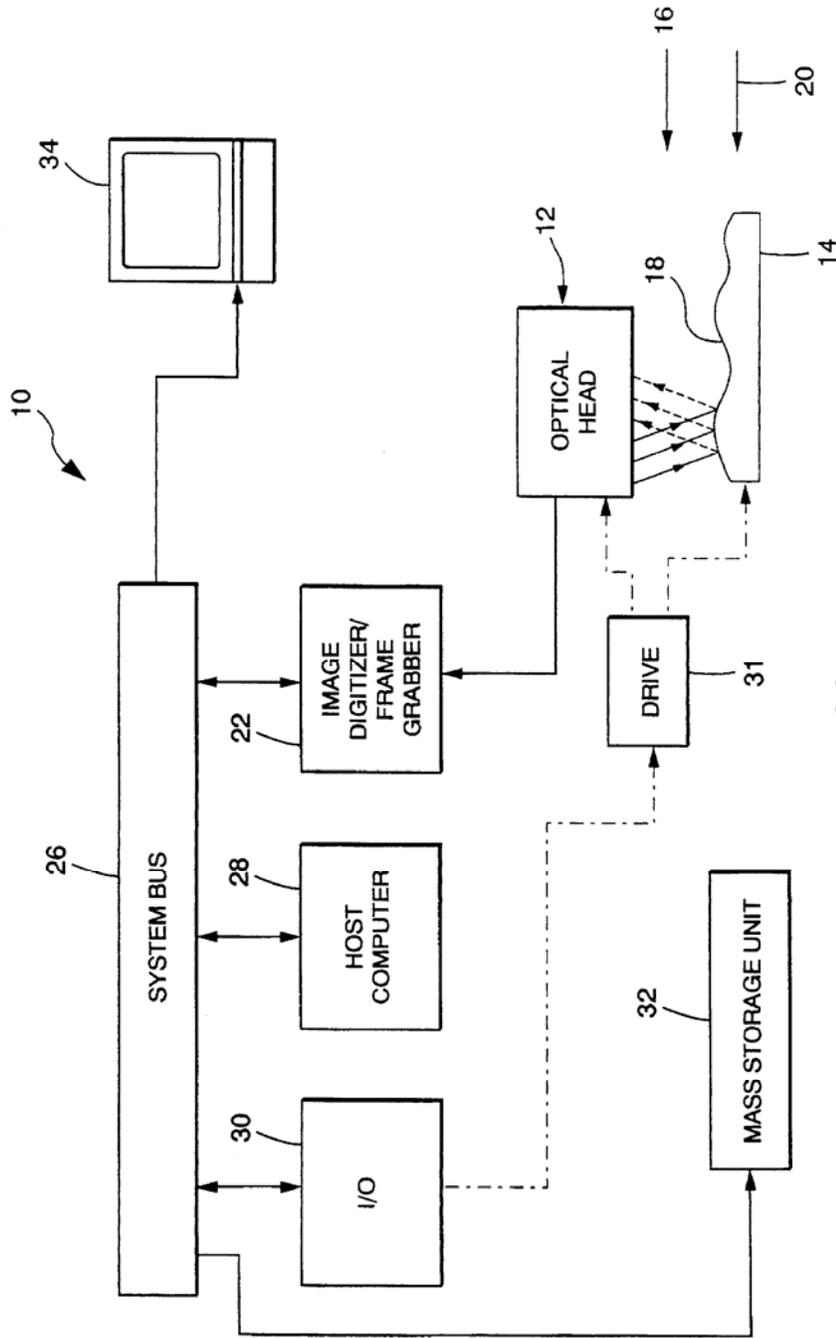
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#### APPENDIX 1

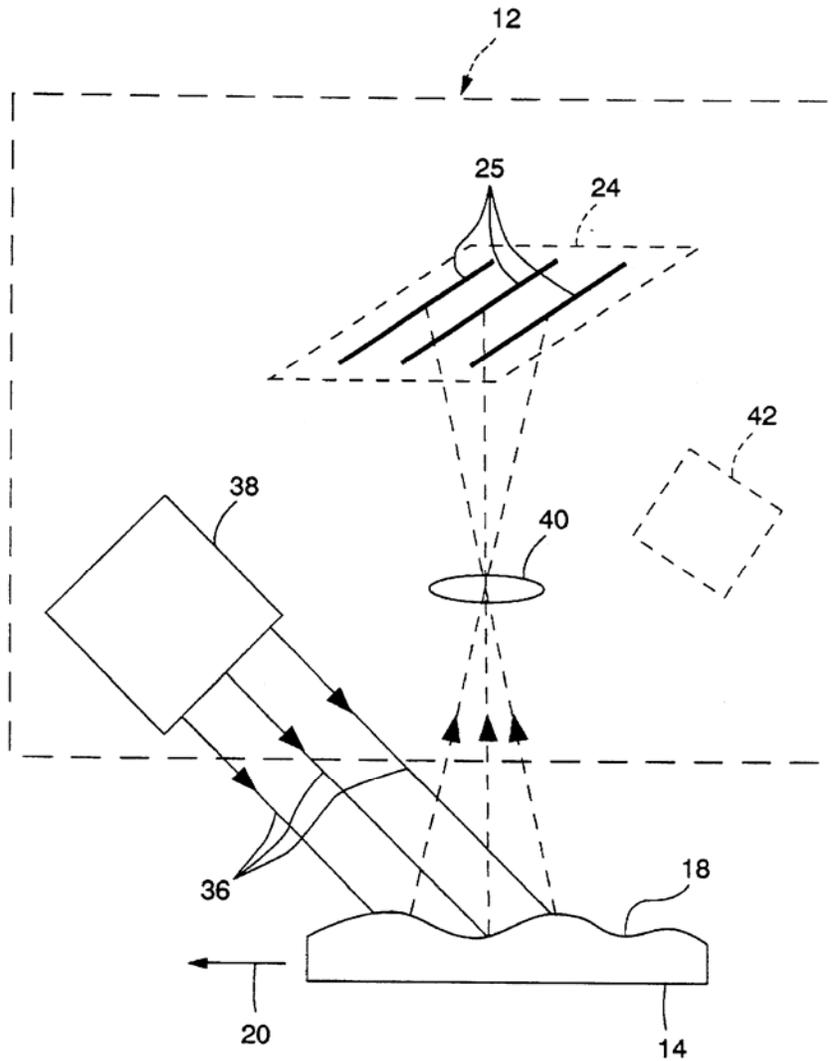
Brief description the drawings of Bieman, U.S. Patent 5,646,733 (drawing sheets 1-2 of Bieman are attached as appendix pages 2-3).

Figure 1 on page 2 of this appendix is a schematic view of a machine vision system including an optical head for carrying out the method and system of the present invention.

Figure 2 on page 3 of this appendix is a schematic view illustrating the details of a first embodiment of the optical head of Figure 1.



*Fig. 1*



*Fig. 2*