

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS

RAH COLOR TECHNOLOGIES LLC,

Plaintiff,

v.

HEIDELBERGER DRUCKMASCHINEN
AG,

Defendant.

Civil Action No.

JURY TRIAL DEMANDED

COMPLAINT

This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code, against Defendant Heidelberg Druckmaschinen AG (“Heidelberg” or “HEI”) that relates to five U.S. patents owned by RAH Color Technologies LLC (“RAH Color Technologies”): U.S. Patent Nos. 6,995,870; 7,729,008; 8,416,444; 8,760,704; and 7,710,560 (collectively, the “Patents-in-Suit”).

On December 6, 2018, the United States Judicial Panel on Multidistrict Litigation issued a decision ordering the following other cases involving RAH Color Technologies’ patents to be transferred to the Northern District of California and assigned to the Honorable Susan Yvonne Illston for coordinated and/or consolidated pretrial proceedings:

RAH Color Technologies LLC v. Adobe Systems, Inc.,

RAH Color Technologies LLC v. Xerox Corporation, and

Electronics For Imaging, Inc. v. RAH Color Technologies LLC.

The MDL that includes these cases is titled *In Re: RAH Color Technologies LLC Patent Litigation*, N.D. Cal. case no. 18-md-02874. RAH Color Technologies believes this case with

Heidelberg is a tag-along action that should also be included in the coordinated and consolidated MDL proceedings under the MDL Panel's Rule 7.1.

THE PARTIES

1. Plaintiff RAH Color Technologies is a limited liability company organized under the laws of the Commonwealth of Virginia. RAH Color Technologies maintains an office at 7012 Colgate Drive, Alexandria, Virginia 22307. RAH Color Technologies owns numerous United States patents generally related to the field of color management. Dr. Richard A. Holub manages RAH Color Technologies and is a named inventor of the Patents-in-Suit.

2. Defendant Heidelberger Druckmaschinen AG is a company duly organized and existing under the laws of Germany, with its principal place of business at Kurfürsten-Anlage 52-60, D-69115 Heidelberg, Postfach 10 29 40, D-69019 Heidelberg, Germany. On information and belief, Heidelberger Druckmaschinen AG can be served with process at that address.

3. Heidelberg manufactures, makes, uses, sells, imports, and offers for sale printer, prepress and workflow hardware and software that employ color measurement and management techniques in the U.S.

JURISDICTION AND VENUE

4. This Complaint states causes of action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 100 *et seq.*, and, more particularly 35 U.S.C. § 271.

5. This Court has subject matter jurisdiction of this action under 28 U.S.C. §§ 1331 and 1338(a) in which the district courts have original and exclusive jurisdiction of any civil action for patent infringement.

6. Defendant Heidelberg is subject to this Court's general personal jurisdiction pursuant to due process and/or the Illinois Long Arm Statute, Illinois Statutes 735 § 5/2-209, due

at least to its substantial business conducted in this District, including: (i) having transacted business within the State of Illinois and attempted to derive financial benefit from residents of the State of Illinois in this District, including benefits directly related to the instant patent infringement causes of action set forth herein; (ii) having placed its products and services into the stream of commerce throughout the United States and having been actively engaged in transacting business in Illinois and in this District, and (iii) having committed the complained of tortious acts in Illinois and in this District. Alternatively, this Court has personal jurisdiction over Heidelberg pursuant to Federal Rule of Civil Procedure 4(k)(2) based on Heidelberg's contacts with the United States as a whole.

7. Heidelberg, directly and/or through subsidiaries and agents (including distributors, retailers, and others), makes, imports, ships, distributes, offers for sale, sells, uses, and advertises (including offering products and services through its website, <https://www.heidelberg.com/us/en/>, as well as other retailers) its products and/or services in the United States, the State of Illinois, and the Northern District of Illinois.

8. Heidelberg, directly and/or through its subsidiaries and agents (including distributors, retailers, and others), has purposefully and voluntarily placed one or more of its infringing products and/or services, as described below, into the stream of commerce with the expectation that they will be purchased and used by consumers in the Northern District of Illinois in an infringing manner. These infringing products and/or services have been and continue to be purchased and used by consumers in the Northern District of Illinois. Heidelberg has committed acts of patent infringement within the State of Illinois and, more particularly, within the Northern District of Illinois.

9. This Court's exercise of personal jurisdiction over Heidelberg is consistent with Illinois Long Arm Statute, Illinois Statutes 735 § 5/2-209, and traditional notions of fair play and substantial justice.

10. Venue is proper in this District under 28 U.S.C. §1400(b), which provides that "Any civil action for patent infringement may be brought in the judicial district where the defendant resides, or where the defendant has committed acts of infringement and has a regular and established place of business." Venue is proper as to Defendant Heidelberg, which is organized under the laws of Germany, under 28 U.S.C. §1391(c)(3) that provides that "a defendant not resident in the United States may be sued in any judicial district, and the joinder of such a defendant shall be disregarded in determining where the action may be brought with respect to other defendants."

BACKGROUND FACTS REGARDING RAH COLOR TECHNOLOGIES

11. RAH Color Technologies is owned by Dr. Richard A. Holub, who is a named inventor of all its patent assets. Dr. Holub holds a Ph.D. in Neurophysiology and has studied and worked extensively in the fields of vision and color reproduction for nearly fifty years.

12. For example, between 1983 and 1994, Dr. Holub worked for several leading companies including Eastman Kodak (following its acquisition of Eikonix Corp., which Dr. Holub joined in 1983), Agfa/Bayer and SuperMac Technologies where he served as Chief Color Scientist, Technology Consultant, and Principal Engineer, respectively, and had responsibility for developing and/or managing development of color technologies for new products.

13. Dr. Holub has additionally been a leader in development, research, and education in the graphic arts industry.

14. For example, for ten consecutive years beginning in 1993-94, Dr. Holub was elected to and served on the Board of Directors of The Technical Association of the Graphic Arts (“TAGA”), now a part of the Printing Industries of America. For nine of those ten years, Dr. Holub was an officer, serving three years as Technical Vice President and Papers Chair, two years as Executive Vice President, two years as President and two years as Immediate Past President. During his three years as Technical VP, Dr. Holub organized four technical conferences, including TAGA’s first-ever international conference, and, in addition, TAGA’s contributions to the Graphic Arts Show Company’s “Concepts” Conference in two successive years.

15. Between 1995 and 1998, Dr. Holub taught in various instructional programs at Rochester Institute of Technology, especially taking responsibility for research methods courses offered to Master’s students pursuing the technology concentration in the School of Printing Management and Sciences (subsequently renamed the School of Print Media). During that time he served on thesis committees for a number of students in the Master’s program. Many graduates of that program hold significant positions in the publishing and printing industries. In addition, during the early 1990’s, Dr. Holub served as a key technical contributor to early standards developed by CGATS, the Committee for Graphic Arts Technical Standards.

16. Spanning almost two decades, Dr. Holub’s R&D work (alone and with collaborators) resulted in 11 papers presented to TAGA’s Annual Technical Conference, all of which subsequently appeared in published Conference *Proceedings*. His research also resulted in the contribution of at least four (4) important papers to refereed journals, including the *Journal of Imaging Technology* and *Color Research and Application*, as well as contributions to symposia organized by The Society for Imaging Science and Technology (IS&T), the Society of

Photo-Optical Instrumentation Engineers (SPIE), and the Institute of Electrical and Electronics Engineers (IEEE).

17. In 1994, Dr. Holub began work on a new business that would leverage inventive developments in color measurement, imaging system architecture, user-interface and color reproduction technologies to implement open and accurate color reproduction in a networked environment. Over the next several years, Dr. Holub rented laboratory/demo space from RIT Research Corp., hired students from the Rochester Institute of Technology as well as software and hardware contractors to assist him in developing a first product prototype. The prototype combined instrumentation for fully automatic display calibration with software support for highly accurate soft-proofing. During this time, he also prepared and filed the first two in a series of significant patent disclosures to cover implementations of inventive concepts.

18. Dr. Holub formed Imagicolor Corporation in 1998 to commercialize his prototype described above in paragraph 17. Further efforts at business development continued, however, investment did not materialize and Imagicolor was eventually dissolved.

19. Though commercialization of the prototype did not come to fruition, Dr. Holub continued to innovate, and pursue patents on those innovations, with the United States Patent Office. In 2005, RAH Color Technologies LLC was formed as a vehicle for an on-going licensing program for companies whose products depend on Dr. Holub's innovations.

BACKGROUND FACTS REGARDING THE RAH COLOR TECHNOLOGIES PATENT PORTFOLIO

20. The United States Patent Office has awarded Dr. Holub 35 patents to date, including the following Patents-in-Suit:

- United States Patent No. 6,995,870, entitled "System for Distributing and Controlling Color Reproduction at Multiple Sites" (the '870 Patent);

- United States Patent No. 7,729,008, entitled “System for Distributing and Controlling Color Reproduction at Multiple Sites” (the ’008 Patent);
- United States Patent No. 8,416,444, entitled “System for Distributing and Controlling Color Reproduction at Multiple Sites” (the ’444 Patent);
- United States Patent No. 8,760,704, entitled “System for Distributing and Controlling Color Reproduction at Multiple Sites” (the ’704 Patent)
- United States Patent No. 7,710,560, entitled “System for Distributing and Controlling Color Reproduction at Multiple Sites” (the ’560 Patent);

21. The United States Patent Office has considered over 500 references during the prosecution of Dr. Holub’s patent applications.

22. Hundreds of subsequently filed patent applications by third parties have cited to Dr. Holub’s patents.

23. RAH Color Technologies has licensed the technology covered by its patents to 12 of the largest providers of color imaging and printing products and services for consumer and professional segments in the world. RAH Color Technologies has also licensed its innovations to two additional manufacturers with extensive experience in the color measurement and management space. Additionally, 13 major companies have entered into end-user license agreements with RAH Color Technologies.

24. These industry-leading companies have each recognized the contributions Dr. Holub has made to the fields of color management, remote proofing, and measurement and control of color product quality.

25. All right, title, and interest in the Patents-in-Suit are held by RAH Color Technologies.

HEIDELBERG’S AWARENESS OF THE PATENTS-IN-SUIT

26. On November 13, 2014, counsel for RAH Color Technologies (Global IP Law Group, LLC) sent a seven-page letter to Susan Nofi, SVP and General Counsel of Heidelberg USA offering Heidelberg a license to RAH Color Technologies' patents. The letter indicated that Heidelberg was using RAH Color Technologies' patented technologies, including all of the Patents-in-Suit.

27. Heidelberg did not respond to the November 13, 2014 letter.

28. On March 17, 2015, counsel for RAH Color Technologies (Global IP Law Group, LLC) sent Ms. Nofi an email asking Heidelberg "Can you please inform us of the status of Heidelberg's consideration of RAH Color Technologies' November 13, 2014 letter?"

29. Heidelberg did not respond to the March 17, 2015 email.

30. On April 23, 2015, counsel for RAH Color Technologies (Global IP Law Group, LLC) sent Harold Weimer, President of Heidelberg Americas, an email that again attached the seven page November 13, 2014 letter. The email stated: "Please see the attached letter. We have attempted to open a dialogue with Heidelberg through its general counsel, Susan Nofi, via email, Federal Express, and phone since November of last year. However, we have not received a response of any kind to date. If you are able, please let us know who is the right person at Heidelberg to discuss the contents of the attached letter with."

31. Heidelberg did not respond to the first April 23, 2015 email.

32. Also on April 23, 2015, counsel for RAH Color Technologies (Global IP Law Group, LLC) sent Ms. Nofi an email stating: "I have been unable to confirm that you are receiving my emails, Federal Express package, and voicemail about this matter. I have accordingly attempted to contact Mr. Weimer to try to identify the proper person at Heidelberg to discuss this matter with."

33. Heidelberg did not respond to the second April 23, 2015 email.

34. On December 10, 2015, counsel for RAH Color Technologies (Global IP Law Group, LLC) again emailed Mr. Weimer and Ms. Nofi informing Heidelberg of additional licensees, and seeking the status of Heidelberg's review, stating: "I have not received a response to any of my communications below. My client, RAH Color Technologies, continues to be interested in a dialogue with Heidelberg about its patent portfolio, and the issues raised in my November, 2014 letter (attached here for reference). . . . We'd like to move this matter forward with Heidelberg, and would be happy to travel to Georgia for an in-person meeting if you think that would be helpful. Please let me know."

35. Heidelberg did not respond to the December 10, 2015 email.

36. On March 21, 2016, counsel for RAH Color Technologies (Global IP Law Group, LLC) again emailed Heidelberg informing Heidelberg of an additional licensee, and stating: "We respectfully request that Heidelberg consider RAH Color Technologies's widespread licensing in the industry in its evaluation of this matter, and would greatly appreciate an acknowledgment of receipt of any of my emails, Federal Express packages, or phone calls."

37. Heidelberg did not respond to the March 21, 2016 email.

38. On May 10, 2016, counsel for RAH Color Technologies sent an email to Harold Weimer and Susan Nofi regarding RAH Color Technologies' patents and Heidelberg's infringement of those patents. The email further indicated: "Our office has reached out to Heidelberg at least seven times dating back to November 2014 to discuss this matter. Heidelberg has never responded to any communication." The email then requested that Heidelberg identify a contact at Heidelberg with whom RAH Color Technologies and its counsel should follow up such that the parties could conduct a telephone call or meeting.

39. Heidelberg did not respond to the May 10, 2016 email.

40. On April 13, 2017, counsel for RAH Color Technologies sent an email to Harold Weimer and Susan Nofi providing an update on licensing and litigation proceedings, and offering to meet with Heidelberg at its headquarters in Germany.

41. Heidelberg did not respond to the April 13, 2017 email.

42. On December 17, 2018, counsel for RAH Color Technologies sent an email to Aleksander Goranin of Duane Morris, who was counsel for Heidelberg during its involvement as a third party that provided discovery in the *RAH Color Technologies LLC v. Quad/Graphics, Inc.* case in the Eastern District of Wisconsin (Case No. 2:18-cv-00087-JPS) requesting dialogue that would obviate the need for litigation.

43. Neither counsel nor Heidelberg responded to the December 17, 2018 email.

44. Heidelberg never responded in any way to any of RAH Color Technologies' efforts to contact Heidelberg about its infringement of the RAH Color Technologies patents or its need for a license.

45. At no time has Heidelberg discussed the patents with RAH Color Technologies directly.

46. At no time has Heidelberg discussed any resolution of any patent infringement issues with RAH Color Technologies.

47. At no time has Heidelberg raised any non-infringement argument with respect to any of the Patents-in-Suit.

48. Heidelberg's only interaction with RAH Color Technologies occurred during litigation with one of Heidelberg's customers, Quad/Graphics, Inc. After Quad/Graphics sent a subpoena to Heidelberg in that case, Heidelberg provided references that Heidelberg contended

served as prior art against U.S. Patent 8,535,357, which was asserted against Quad/Graphics' use of Heidelberg products. The 8,535,357 patent is not at issue in this case. Heidelberg also provided a deposition in the Quad/Graphics case on October 4, 2018, which focused on the Heidelberg-provided references.

49. Heidelberg promotes its capabilities of accurately measuring and managing color in support of Heidelberg's business of providing printers, measuring devices, and software that it sells and offers for sale to customers in the U.S. Heidelberg advertises its color management in the U.S, including for example, in "Print Color Management" at

https://www.heidelberg.com/global/en/lifecycle/services/sub_services_2/color_management/print_color_management/Print_color_management.jsp and "Tools for perfect color management.

Prinect Color Toolbox" at

https://www.heidelberg.com/global/en/lifecycle/workflow/prinect_modules/color_workflow_1/prinect_color_toolbox/product_information_97/prinect_color_toolbox.jsp.

50. As part of its business, Heidelberg uses printer hardware and software that employ color measurement and management techniques in the U.S. which, alone or in combination, infringe various claims of the Patents-in-Suit.

51. Heidelberg has in the past and continues to directly infringe the asserted claims of the Patents-in-Suit pursuant to 35 U.S.C. § 271 by using methods and using, making and importing systems, software, and apparatuses covered by the asserted patent claims identified below.

COUNT I: INFRINGEMENT OF U.S. PATENT '870 CLAIM 34

52. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1 to 51 of this Complaint as though set forth in full herein.

53. Claim 34 of the '870 Patent provides:

Claim 34 Preamble	A method for providing control to a user for processing color images comprising the steps of:
Element A	providing an interface operable at a computer through which the user is able to select a plurality of sites having one or more color input or output devices;
Element B	communicating between said sites through a network interface at said sites; and
Element C	providing information for transforming input color image data into output color image data for the color input or output devices at said plurality of sites such that colors produced by the color devices appear substantially the same within colors attainable by each of the devices, wherein said information for transforming comprises information relating the color gamuts of different ones of said color devices to each other and user preferences for color reproduction for at least one of the color devices.

54. “HEI Accused Color Products” include Heidelberg Prinect Image Control used in combination with Prinect Color Toolbox, Prinect Prepress Manager, and/or Prinect PDF Toolbox; and other software that include the same or equivalent functionality described in paragraphs 55-59 of Count I, paragraph 67 of Count II, paragraph 75 of Count III, and paragraph 83 of Count IV.

55. In HEI Accused Color Products, Image Control communicates with up to four rendering devices (e.g., Speedmaster presses) using a network connection. Image Control includes a graphical user interface that allows a user to select one (or more) of the connected rendering devices. Image Control is also used for ensuring the accuracy of color rendering by at least an output device, by providing measurements as needed for calibration of each device to a common standard, where current calibration data ensure that each device is in a known state with respect to the common standard.

56. In HEI Accused Color Products, Color Toolbox receives color measurements provided by Image Control, and uses those color measurements for the generation of profiles that comply with the International Color Consortium (“ICC”) specifications. ICC profiles created by Color Toolbox for use with connected rendering devices include various data structures, such as transformations pointed to by AToB-type and BToA-type tags. User preferences, such as any gray component replacement settings, are also incorporated into Color Toolbox-created profiles.

57. These AToB and BToA-type transformations are used, at least in part, for transforming input color image data into output color image data appropriate for a particular rendering device (e.g., conversion of device-dependent numbers supplied by an input device to device independent color values in Profile Connection Space (“AToB”) and from there to codes specific to a calibrated rendering device). For example, Prepress Manager uses these tags when converting color images from RGB to CMYK. Prepress Manager also employs additional data during the conversion process, including user preferences such as the type of rendering intent to be used.

58. HEI Accused Color Products are ICC v.4-compliant, which means they support the use of the ICC-defined Perceptual Reference Medium Gamut (“PRMG”) or a similarly structured description of device gamuts for gamut mapping. For example, upon information and belief, Color Toolbox creates ICC profiles that map to (on input) or from (on output) the PRMG, or that map between devices’ gamut descriptors that are structured as is the PRMG. For example, upon information and belief, Prepress Manager processes profiles that rely upon the PRMG or similarly structured gamut data (or stores such gamut data) to implement gamut mapping that insures that colors produced by the color devices appear substantially the same within colors attainable by each of the devices.

59. The PRMG provides a stored and standardized gamut representation in coordinates of the ICC-defined Profile Connection Space (“PCS”) that serves as an intermediate for transforming colors between devices having different gamuts. A dataflow using the PRMG employs the stored PRMG to map colors from an input device to an output device using an intermediate color-to-color’ transformation (i.e., input gamut in PCS values to PRMG and/or PRMG to an output gamut represented in PCS coordinates). In addition, a color-to-color’ mapping that embodies a relationship between gamuts can be computed directly using input and output gamut descriptors that are structured as is the PRMG.

60. Heidelberg infringes claim 34 of the ’870 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

61. In addition, Heidelberg induces infringement of claim 34 of the ’870 Patent by importing and selling the HEI Accused Color Products for use by its customers and/or end-users.

62. Upon information and belief, Heidelberg’s customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 34 of the ’870 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 34 of the ’870 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 34 of the ’870 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg’s inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other

forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 34 of the '870 Patent by using the HEI Accused Color Products.

63. Heidelberg has had knowledge of the '870 Patent and RAH Color Technologies' allegations that the HEI Accused Color Products infringe claim 34 of the '870 Patent since at least November 13, 2014.

64. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT II: INFRINGEMENT OF U.S. PATENT '870 CLAIM 39

65. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1 to 64 of this Complaint as though set forth in full herein.

66. Claim 39 of the '870 Patent provides:

Claim 39	The method according to claim 34 wherein said user preferences for color reproduction include at least one aspect of the utilization of one or more neutral colorants.
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67. In HEI Accused Color Products, Color Toolbox includes preferences for GCR. GCR controls the amount of neutral colorant (e.g., black ink) used in place of non-neutral colorants (e.g., cyan, magenta, or yellow ink).

68. Heidelberg infringes claim 39 of the '870 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

69. In addition, Heidelberg induces infringement of claim 39 of the '870 Patent by importing and selling the HEI Accused Color Products for use by its customers and/or end-users.

70. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 39 of the '870 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 39 of the '870 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 39 of the '870 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 39 of the '870 Patent by using the HEI Accused Color Products.

71. Heidelberg has had knowledge of the '870 Patent and RAH Color Technologies' allegations that the HEI Accused Color Products infringe claim 39 of the '870 Patent since at least November 13, 2014.

72. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT III: INFRINGEMENT OF U.S. PATENT '870 CLAIM 41

73. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1 to 64 of this Complaint as though set forth in full herein.

74. Claim 41 of the '870 Patent provides:

Claim 41	The method according to claim 34 further comprising the step of annotating images produced by at least one of said color devices.
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75. In HEI Accused Color Products, PDF Toolbox includes an annotation feature allowing users to add annotations to images viewed on a computer monitor.

76. Heidelberg infringes claim 41 of the '870 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

77. In addition, Heidelberg induces infringement of claim 41 of the '870 Patent by importing and selling the HEI Accused Color Products for use by its customers and/or end-users.

78. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 41 of the '870 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 41 of the '870 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 41 of the '870 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 41 of the '870 Patent by using the HEI Accused Color Products.

79. Heidelberg has had knowledge of the '870 Patent and RAH Color Technologies' allegations that the HEI Accused Color Products infringe claim 41 of the '870 Patent since at least November 13, 2014.

80. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT IV: INFRINGEMENT OF U.S. PATENT '870 CLAIM 43

81. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1 to 64 of this Complaint as though set forth in full herein.

82. Claim 43 of the '870 Patent provides:

Claim 43	The method according to claim 34 further comprising the step of verifying whether said information for transforming properly transforms said color image data at one or more of said sites.
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83. In HEI Accused Color Products, Color Toolbox is used to validate that rendered colors accurately match known standards or references. The rendered colors themselves are based on transformations defined by ICC profiles and processed, for example, by Prepress Manager. In addition, Prinect Image Control monitors color reproduction in the image area and corrects for fluctuations in the process for consistent, controlled reproduction with respect to a device-independent reference.

84. Heidelberg infringes claim 43 of the '870 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

85. In addition, Heidelberg induces infringement of claim 43 of the '870 Patent by importing and selling the HEI Accused Color Products for use by its customers and/or end-users.

86. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 43 of the '870 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 43 of the '870 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 43 of the '870 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 43 of the '870 Patent by using the HEI Accused Color Products.

87. Heidelberg has had knowledge of the '870 Patent and RAH Color Technologies' allegations that the HEI Accused Color Products infringe claim 43 of the '870 Patent since at least November 13, 2014.

88. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT V: INFRINGEMENT OF U.S. PATENT '008 CLAIM 28

89. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1 to 51 of this Complaint as though set forth in full herein.

90. Claim 28 of the '008 Patent provides:

Claim 28 Preamble	A method for color rendering using a computer system having a display coupled to said computer system, said method comprising the steps of:
Element A	displaying on the display a menu of selections which enable a user to select at least user preferences for color reproduction; and
Element B	storing in memory at least tonal transfer curves for a plurality of color channels, color image data, and one or more color transformations for converting a first set of color coordinates into a second set of coordinates wherein said tonal transfer curves and said one or more color transformations are at least partly in accordance with calibration data in device-independent units of color and are useable in combination to control rendering of said color image data, and at least one of said one or more color transformations is a chromatic adaptation transform useable to compensate for change in viewing conditions.

91. “HEI Accused Print Workflow Systems” include Prinect Prepress Manager used alone, or in combination with Prinect PDF Toolbox, Prinect Color Toolbox, and/or Prinect Image Control; and other software that include the same or equivalent functionality described in paragraphs 92-98 of Count V, paragraph 106 of Count VI, paragraphs 114-116 of Count VII, paragraphs 124-125 of Count VIII, paragraph 133 of Count IX, paragraph 141 of Count X, paragraph 149 of Count XI, paragraph 157 of Count XII, paragraph 165 of Count XIII, and paragraph 173 of Count XIV.

92. HEI Accused Print Workflow Systems are used to control rendering of color images and graphics through a graphical user interface (e.g., “Prinect Cockpit” used for Prepress Manager, PDF Toolbox, and Color Toolbox). At least the Prinect Cockpit graphical user interface includes various preferences for color reproduction that a user can select, such as the paper stock and gradation of black ink (as reflected in choice of ICC profile) to use, as examples.

93. HEI Accused Print Workflow Systems include software modules installed on a computer system having memory, a network connection, a display, and input device to operate the software.

94. In HEI Accused Print Workflow Systems, at least Prepress Manager and Color Toolbox store and use ICC profiles that include tagged elements (e.g., “BToA” transforms) that are used to transform device-independent (PCS) color coordinates to coordinates for an output device, such as a color printer or color display for rendering, using a 3x3 matrix and/or multidimensional lookup table. One-dimensional tables that correspond to tonal transfer curves are incorporated in the BToA data structure, and are used in conjunction with the 3x3 matrix and/or multidimensional lookup table during the transformation process.

95. In HEI Accused Print Workflow Systems, at least Prepress Manager and Color Toolbox also store and use tonal transfer curves (e.g., platesetter curves) that insure a device is in a known state of calibration, and are used in combination with ICC profiles for preparing colors for rendering. In addition, at least the “Calibration Tool” within Prinect Color Toolbox provides “central management [for] . . . process calibration of the print process.” This entails generating and storing linearization curves (corresponding to tonal transfer functions) responsive to measurements of tonal gradation samples rendered for each colorant channel of a device. The process control ensures that the device is maintained in a calibrated state. These linearization curves can further be used by Color Toolbox at least in part to create ICC profiles.

96. In HEI Accused Print Workflow Systems, at least Prepress Manager stores print jobs that include color images.

97. In HEI Accused Print Workflow Systems, at least Prepress Manager and Color Toolbox store and use chromatic adaptation transforms useable to account for changes in

viewing conditions. These transforms are accessible from ICC profiles through the “chromaticAdaptationTag.”

98. In general, rendering devices (including those used with HEI Accused Print Workflow Systems) must be calibrated from time to time to ensure accurate color rendering, resulting in adjustments to tonal transfer curves and color transformations that are made in accordance with data from the calibration. Calibration devices in general, including calibration devices provided and used by Heidelberg, use device-independent color units, such as L*a*b* or density, resulting in device-independent calibration data. For example, Image Control is used to measure colors, with color measurements passed to Color Toolbox as L*a*b* color values. Color Toolbox then creates ICC profiles using those measurements.

99. Heidelberg infringes claim 28 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

100. In addition, Heidelberg induces infringement of claim 28 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

101. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 28 of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 28 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 28 of the '008 Patent with the specific intent to encourage such

infringement, and knowing that the acts induced constitute patent infringement. Heidelberg’s inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 28 of the ’008 Patent by using the HEI Accused Print Workflow Systems.

102. Heidelberg has had knowledge of the ’008 Patent and RAH Color Technologies’ allegations that the HEI Accused Print Workflow Systems infringe claim 28 of the ’008 Patent since at least November 13, 2014.

103. As a direct and proximate result of Heidelberg’s acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT VI: INFRINGEMENT OF U.S. PATENT ’008 CLAIM 29

104. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

105. Claim 29 of the ’008 Patent provides:

Claim 29	The method according to claim 28 further comprising the step of enabling the user to display a reproduction of said color image data on the display, and to associate annotations with said reproduction.
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106. HEI Accused Print Workflow Systems include PDF Toolbox that is used with, for example, Prepress Manager. PDF Toolbox allows a user to preview page and image elements of a color print job and associate annotations with particular features on a page or image. The

annotations are shared with other users on other computers when reviewing or proofing a job, as an example.

107. Heidelberg infringes claim 29 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

108. In addition, Heidelberg induces infringement of claim 29 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

109. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 29 of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 29 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 29 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 29 of the '008 Patent by using the HEI Accused Print Workflow Systems.

110. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 29 of the '008 Patent since at least November 13, 2014.

111. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT VII: INFRINGEMENT OF U.S. PATENT '008 CLAIM 30

112. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

113. Claim 30 of the '008 Patent provides:

Claim 30	The method according to claim 28 wherein said storing step further comprises storing in the memory gamut data of at least the color output device or another color device in device independent units of color for use in combination with said tonal transfer curves and said one or more color transformations to control rendering of said color image data for improved color matching between said color output device and said another color device.
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114. HEI Accused Print Workflow Systems support and use version 4 ICC profiles, which means they can store, use and process the ICC-defined Perceptual Reference Medium Gamut ("PRMG"), or similarly structured gamut data.

115. HEI Accused Color Products are ICC v.4-compliant, which means they support the use of the ICC-defined Perceptual Reference Medium Gamut ("PRMG") or a similarly structured description of device gamuts for gamut mapping. For example, upon information and belief, Color Toolbox creates ICC profiles that map to (on input) or from (on output) the PRMG, or that map between devices' gamut descriptors that are structured as is the PRMG. For example,

upon information and belief, Prepress Manager processes profiles that rely upon the PRMG or similarly structured gamut data (or stores such gamut data) to implement gamut mapping that insures that colors produced by the color devices better match.

116. The PRMG provides a stored and standardized gamut representation in coordinates of the ICC-defined Profile Connection Space (“PCS”) that serves as an intermediate for transforming colors between devices having different gamuts. A dataflow using the PRMG employs the stored PRMG, to map colors from an input device to an output device using an intermediate color-to-color’ transformation (i.e., input gamut in PCS values to PRMG and/or PRMG to an output gamut represented in PCS coordinates). In addition, a color-to-color’ mapping that embodies a relationship between gamuts can be computed directly using input and output gamut descriptors that are structured as is the PRMG.

117. Heidelberg infringes claim 30 of the ’008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

118. In addition, Heidelberg induces infringement of claim 30 of the ’008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

119. Upon information and belief, Heidelberg’s customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 30 of the ’008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 30 of the ’008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly

infringe at least claim 30 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 30 of the '008 Patent by using the HEI Accused Print Workflow Systems.

120. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 30 of the '008 Patent since at least November 13, 2014.

121. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT VIII: INFRINGEMENT OF U.S. PATENT '008 CLAIM 31

122. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

123. Claim 31 of the '008 Patent provides:

Claim 31 Preamble	The method according to claim 28 further comprising the steps of
Element C	enabling display of parts of said color image data which are outside the gamut of the color output device and
Element D	storing a data structure in said memory whose inputs are color values and whose outputs indicate whether input values are either in or out of gamut for the color output device.

124. In HEI Accused Print Workflow Systems, at least Prepress Manager and Color Toolbox store, support, and use ICC v.4-compliant profiles, which means they can use and process profiles containing the “gamutTag.” The gamutTag is a data structure that uses color values (i.e., PCS device-independent color values) as inputs, and outputs a zero (indicating the input color is in gamut for the output device) or a non-zero (indicating the input color is out of gamut for the output device).

125. The gamutTag allows HEI Accused Print Workflow Systems to display colors of a color image or document that are outside the gamut of the device used to render the color image or document.

126. Heidelberg infringes claim 31 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

127. In addition, Heidelberg induces infringement of claim 31 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

128. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 31 of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 31 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 31 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's

inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 31 of the '008 Patent by using the HEI Accused Print Workflow Systems.

129. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 31 of the '008 Patent since at least November 13, 2014.

130. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT IX: INFRINGEMENT OF U.S. PATENT '008 CLAIM 33

131. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

132. Claim 33 of the '008 Patent provides:

Claim 33	The method according to claim 28 further comprising the step of providing a colorant-to-colorant transformation which enables proofing or simulation of one output device by another.
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133. In HEI Accused Print Workflow Systems, at least Prepress Manager and Color Toolbox support device link profiles, and convert device-dependent input colors in an image or document through a device link color profile, which is stored at least temporarily. Device link profiles are used at least for soft-proofing on a video display a color reproduction by a different rendering device.

134. Heidelberg infringes claim 33 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

135. In addition, Heidelberg induces infringement of claim 33 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

136. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 33 of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 33 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 33 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 33 of the '008 Patent by using the HEI Accused Print Workflow Systems.

137. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 33 of the '008 Patent since at least November 13, 2014.

138. As a direct and proximate result of Heidelberg’s acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT X: INFRINGEMENT OF U.S. PATENT ’008 CLAIM 36

139. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-111 of this Complaint as though set forth in full herein.

140. Claim 36 of the ’008 Patent provides:

Claim 36	The method according to claim 29 further comprising the step of enabling communication with one or more other computer systems through a network interface of said computer system, in which said annotations are communicated to one or more users at one or more other computer systems.
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141. In HEI Accused Print Workflow Systems, PDF Toolbox allows users to add annotations to images for review and approval purposes. Images annotated in PDF Toolbox are shared (e.g., exported) with other users over a network.

142. Heidelberg infringes claim 36 of the ’008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

143. In addition, Heidelberg induces infringement of claim 36 of the ’008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

144. Upon information and belief, Heidelberg’s customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 36 of the ’008 Patent. Heidelberg actively induces customers and users to directly infringe each and

every claim limitation of at least claim 36 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 36 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 36 of the '008 Patent by using the HEI Accused Print Workflow Systems.

145. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 36 of the '008 Patent since at least November 13, 2014.

146. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XI: INFRINGEMENT OF U.S. PATENT '008 CLAIM 37

147. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

148. Claim 37 of the '008 Patent provides:

Claim 37	The method according to claim 28 further comprising the step of displaying on the display user preferences for one or more of GCR, UCR or maximum black.
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149. In HEI Accused Print Workflow Systems, Color Toolbox includes user selectable settings for at least GCR.

150. Heidelberg infringes claim 37 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

151. In addition, Heidelberg induces infringement of claim 37 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

152. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 37 of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 37 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 37 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 37 of the '008 Patent by using the HEI Accused Print Workflow Systems.

153. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 37 of the '008 Patent since at least November 13, 2014.

154. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XII: INFRINGEMENT OF U.S. PATENT '008 CLAIM 38

155. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51, 89-103, and 147-154 of this Complaint as though set forth in full herein.

156. Claim 38 of the '008 Patent provides:

Claim 38	The method according to claim 37 wherein said user preferences further comprise a neutral definition in terms of mixtures of colorants, wherein one or more neutral definitions are displayed graphically.
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157. In HEI Accused Print Workflow Systems, Color Toolbox further includes "black generation with length and width" settings that define colorant mixtures used for creating grays. The gray mixture, or gray balance curve, is graphically depicted, showing the amount of cyan, magenta, yellow, and black inks used.

158. Heidelberg infringes claim 38 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

159. In addition, Heidelberg induces infringement of claim 38 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

160. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 38

of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 38 of the '008 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 38 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 38 of the '008 Patent by using the HEI Accused Print Workflow Systems.

161. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 38 of the '008 Patent since at least November 13, 2014.

162. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XIII: INFRINGEMENT OF U.S. PATENT '008 CLAIM 39

163. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

164. Claim 39 of the '008 Patent provides:

Claim 39	The method according to claim 28 further comprising the step of displaying on the display a sequence of processing of said color image data.
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165. In HEI Accused Print Workflow Systems, Prepress Manager allows a user to view and configure steps in a workflow by dragging and dropping workflow elements onto the workflow field and linking them together.

166. Heidelberg infringes claim 39 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

167. In addition, Heidelberg induces infringement of claim 39 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

168. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 39 of the '008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 39 of the '008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 39 of the '008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 39 of the '008 Patent by using the HEI Accused Print Workflow Systems.

169. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 39 of the '008 Patent since at least November 13, 2014.

170. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XIV: INFRINGEMENT OF U.S. PATENT '008 CLAIM 41

171. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 89-103 of this Complaint as though set forth in full herein.

172. Claim 41 of the '008 Patent provides:

Claim 41	The method according to claim 28 further comprising the step of configuring a workflow for processing said color image data by assembling elements representative of said workflow on the display.
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173. In HEI Accused Print Workflow Systems, Prepress Manager allows a user to view and configure steps in a workflow by dragging and dropping workflow elements onto the workflow field and linking them together.

174. Heidelberg infringes claim 41 of the '008 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Print Workflow Systems, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

175. In addition, Heidelberg induces infringement of claim 41 of the '008 Patent by importing and selling the HEI Accused Print Workflow Systems for use by its customers and/or end-users.

176. Upon information and belief, Heidelberg’s customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 41 of the ’008 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 41 of the ’008 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 41 of the ’008 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg’s inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 41 of the ’008 Patent by using the HEI Accused Print Workflow Systems.

177. Heidelberg has had knowledge of the ’008 Patent and RAH Color Technologies’ allegations that the HEI Accused Print Workflow Systems infringe claim 41 of the ’008 Patent since at least November 13, 2014.

178. As a direct and proximate result of Heidelberg’s acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XV: INFRINGEMENT OF U.S. PATENT ’444 CLAIM 11

179. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 of this Complaint as though set forth in full herein.

180. Claim 11 of the ’444 patent provides:

Claim 11 Preamble	A system for controlling color reproduction comprising:
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Element A	a computer at a site;
Element B	memory storing information, said information comprising:
Element C	data representing tonal transfer functions for a plurality of color channels;
Element D	one or more color transformations for converting a first set of color coordinates into a second set of coordinates;
Element E	a gamut filter, said gamut filter representing an array stored in a file and accessible through a file header, wherein said array has inputs which are color values and outputs indicative of whether said color values of said inputs are inside or outside of a color gamut; and
Element F	a chromatic adaptation transform stored in a file and accessible through a file header, said chromatic adaptation transform enabling conversion of input color coordinates to output color coordinates representative of different viewing conditions;
Element G	said memory storing programs for performing at least one color conversion utilizing at least part of said stored information; and
Element H	a network interface enabling communication of at least part of said information by said computer with at least one other site using a network protocol.

181. “HEI Accused Color Workflow Products” include Prinect Prepress Manager used alone, or in combination with Color Toolbox and/or Image Control; and other hardware and software that include the same or equivalent functionality as described in paragraphs 182-187 of Count XV, paragraph 194 of Count XVI, paragraph 202 of Count XVII, paragraphs 210-212 of Count XVIII, paragraph 200 of Count XIX, paragraph 228 of Count XX, and paragraph 236 of Count XXI.

182. HEI Accused Color Workflow Products include software that provides data for controlling color reproduction, with the software installed on computers that have memory.

183. In HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox store and use ICC profiles that include tonal transfer curves as part of tagged elements (e.g., “AToB0” and “BToA0” tags including one-dimensional output tables) for each colorant

channel of a rendering device. At least Prepress Manager and Color Toolbox also store and use tonal transfer curves (e.g., platesetter curves) that insure a device is in a known state of calibration.

184. In addition, at least the “Calibration Tool” within Prinect Color Toolbox provides “central management [for] . . . process calibration of the print process.” This entails generating and storing linearization curves (corresponding to tonal transfer functions) responsive to measurements of tonal gradation samples rendered for each colorant channel of a device. The process control ensures that the device is maintained in a calibrated state (the state for which an associated color profile is valid). These curves/functions are specific to device and printing conditions (e.g., paper stock and ink type used), and can further be used by Color Toolbox at least in part as a baseline for ICC profiles.

185. The “Profile Tool” of Color Toolbox builds ICC v.4 compliant profiles that store data in tagged structures. These profiles include headers read by the HEI Color Management Module (“CMM”) to identify and use the profile constituents. At least Prepress Manager relies on ICC profiles and the CMM to use the tagged data to translate between device dependent coordinates and the Profile Connection Space (“PCS”) and to perform conversions within the PCS. In particular, ‘BtoA’-type transforms (an ICC tagged data structure) translate PCS values to device coordinates for rendering.

186. In HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox store and use ICC profiles that include a gamut filter in the form of a gamut tag element (designated as a “gamutTag”) that uses Profile Connection Space (“PCS”) color values as inputs, and outputs either zero (indicating a color is in-gamut) or non-zero (indicating a color is out-of-gamut). At least Prepress Manager and Color Toolbox also store and use chromatic adaptation

transforms, accessible through ICC profiles and identified by a “chromaticAdaptationTag”, which is used to convert input colors to output colors to be viewed under different conditions (e.g., converting input colors having a D65 white point to output colors to be viewed under D50 illumination).

187. In HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox communicate ICC profiles or constituent data structures to different sites linked to rendering devices, such as proofers or computer-to-plate devices, over a network.

188. Heidelberg infringes claim 11 of the '444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

189. In addition, to the extent that claim 11 of the '444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of claim 11 of the '444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

190. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 11 of the '444 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 11 of the '444 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 11 of the '444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing software only operable on a computer system and

providing specific requirements for supported computer systems to induce its customers and/or end users to directly infringe at least claim 11 of the '444 Patent by using the HEI Accused Color Workflow Products.

191. Heidelberg has had knowledge of the '008 Patent and RAH Color Technologies' allegations that the HEI Accused Color Workflow Products infringe claim 11 of the '444 Patent since at least November 13, 2014.

COUNT XVI: INFRINGEMENT OF U.S. PATENT '444 CLAIM 13

192. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 179-191 of this Complaint as though set forth in full herein.

193. Claim 13 of the '444 patent provides:

Claim 13	The system according to claim 11 wherein said programs further comprise software which provides a graphical user interface based upon screens stored in said memory.
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194. The HEI Accused Color Workflow Products provide a graphical user interface (e.g., "Prinect Cockpit") that centralizes user control of the system.

195. Heidelberg infringes claim 13 of the '444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

196. In addition, to the extent that claim 13 of the '444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of claim 13 of the '444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

197. Upon information and belief, Heidelberg’s customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 13 of the ’444 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 13 of the ’444 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 13 of the ’444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg’s inducement includes, for example, providing software only operable on a computer system and providing specific requirements for supported computer systems to induce its customers and/or end users to directly infringe at least claim 13 of the ’444 Patent by using the HEI Accused Color Workflow Products.

198. Heidelberg has had knowledge of the ’444 Patent and RAH Color Technologies’ allegations that the HEI Accused Color Workflow Products infringe claim 13 of the ’444 Patent since at least November 13, 2014.

199. As a direct and proximate result of Heidelberg’s acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XVII: INFRINGEMENT OF U.S. PATENT ’444 CLAIM 15

200. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 179-191 of this Complaint as though set forth in full herein.

201. Claim 15 of the ’444 patent provides:

Claim 15	The system according to claim 11 wherein said information stored by said memory further comprises a gamut descriptor data structure, said gamut descriptor representing a two-dimensional array whose inputs are coordinates related to
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	lightness and hue and whose outputs represent the saturation at the surface of a color gamut at said input coordinates.
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202. In HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox support ICC v.4-compliant profiles, including PRMG-based gamut mapping, or gamut mapping using similarly structured gamut data. HEI Accused Color Workflow Products store PRMG gamut data, or similarly structured gamut data, as part of the system.

203. Heidelberg infringes claim 15 of the '444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

204. In addition, to the extent that claim 15 of the '444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of claim 15 of the '444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

205. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 15 of the '444 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 15 of the '444 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 15 of the '444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing software only operable on a computer system and providing specific requirements for supported computer systems to induce its customers and/or

end users to directly infringe at least claim 15 of the '444 Patent by using the HEI Accused Color Workflow Products.

206. Heidelberg has had knowledge of the '444 Patent and RAH Color Technologies' allegations that the HEI Accused Color Workflow Products infringe claim 15 of the '444 Patent since at least November 13, 2014.

207. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XVIII: INFRINGEMENT OF U.S. PATENT '444 CLAIM 20

208. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 179-191 of this Complaint as though set forth in full herein.

209. Claim 20 of the '444 patent provides:

Claim 20	The system according to claim 11 wherein said tonal transfer functions are specific to a color device and said tonal transfer functions are modified in accordance with reference data and responsive to user interface settings.
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210. In HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox store tonal transfer curves that are created based on measurements as part of device calibration for process control. Calibration in general entails rendering color patches having known reference values, measuring those color patches as rendered by a particular device, and comparing the measured values to the known reference values. In a similar manner, Image Control provides color measurements from a specific device to Color Toolbox to generate ICC profiles. Color Toolbox includes various settings (e.g., GCR settings) that are also incorporated into the created profile.

211. In HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox include user preferences for tonal transfer adjustments, such as “Set to Linear Curves” and “Preserve Measurement Values” that will be reflected in the stored tonal transfer curves. In addition, the Gray Balance Optimization function of Calibration Tool enables users to customize tonal balance among the device’s channels in accordance with G7 methodology.

212. Additionally, in HEI Accused Color Workflow Products, at least Prepress Manager and Color Toolbox store tonal transfer curves as part of ICC profiles (e.g., one dimensional output tables within the BToA data structure). Color Toolbox creates ICC profiles using measurements from a calibrated rendering device, such that the tonal transfer curves are based on calibration, which itself is based on comparison to known references. Any preferences selected by the user (e.g., GCR settings in Color Toolbox) will also be incorporated into the ICC profile.

213. Heidelberg infringes claim 20 of the ’444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

214. In addition, to the extent that claim 20 of the ’444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of claim 20 of the ’444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

215. Upon information and belief, Heidelberg’s customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 20 of the ’444 Patent. Heidelberg actively induces customers and users to directly infringe each and

every claim limitation of at least claim 20 of the '444 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 20 of the '444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing software only operable on a computer system and providing specific requirements for supported computer systems to induce its customers and/or end users to directly infringe at least claim 20 of the '444 Patent by using the HEI Accused Color Workflow Products.

216. Heidelberg has had knowledge of the '444 Patent and RAH Color Technologies' allegations that the HEI Accused Color Workflow Products infringe claim 20 of the '444 Patent since at least November 13, 2014.

217. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XIX: INFRINGEMENT OF U.S. PATENT '444 CLAIM 21

218. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 171-199 of this Complaint as though set forth in full herein.

219. Claim 21 of the '444 Patent provides:

Claim 21	The system according to claim 13 wherein said graphical user interface enables a user to configure a workflow for processing color image data by assembling elements representative of said workflow on a display.
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220. In HEI Accused Color Workflow Products, Prepress Manager includes a graphical user interface that allows a user to drag and drop processing steps (e.g., Layout

Proofing, Color Management, Contract Proofing) onto a workflow tableau in which various steps of the workflow can be carried out at different sites in a network.

221. Heidelberg infringes claim 21 of the '444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

222. In addition, to the extent that claim 21 of the '444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of claim 21 of the '444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

223. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 21 of the '444 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 21 of the '444 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 21 of the '444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing software only operable on a computer system and providing specific requirements for supported computer systems to induce its customers and/or end users to directly infringe at least claim 21 of the '444 Patent by using the HEI Accused Color Workflow Products.

224. Heidelberg has had knowledge of the '444 Patent and RAH Color Technologies' allegations that the HEI Accused Print Workflow Systems infringe claim 21 of the '444 Patent since at least November 13, 2014.

225. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XX: INFRINGEMENT OF U.S. PATENT '444 CLAIM 23

226. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 171-199 of this Complaint as though set forth in full herein.

227. Claim 23 of the '444 patent provides:

Claim 23	The system according to claim 13 wherein said graphical user interface enables a user to initiate verification of one or more of said color transformations.
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228. In HEI Accused Color Workflow Products, Color Toolbox is used to validate that rendered colors accurately match known standards or references (e.g., through its Quality Monitor component). The rendered colors themselves are based on transformations defined by ICC profiles and processed, for example, by Prepress Manager.

229. Heidelberg infringes claim 23 of the '444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

230. In addition, to the extent that claim 23 of the '444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of

claim 23 of the '444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

231. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 23 of the '444 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 23 of the '444 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 23 of the '444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing software only operable on a computer system and providing specific requirements for supported computer systems to induce its customers and/or end users to directly infringe at least claim 23 of the '444 Patent by using the HEI Accused Color Workflow Products.

232. Heidelberg has had knowledge of the '444 Patent and RAH Color Technologies' allegations that the HEI Accused Color Workflow Products infringe claim 23 of the '444 Patent since at least November 13, 2014.

233. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXI: INFRINGEMENT OF U.S. PATENT '444 CLAIM 24

234. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51, 171-199, and 226-233 of this Complaint as though set forth in full herein.

235. Claim 24 of the '444 patent provides:

Claim 24	The system according to claim 23 wherein said programs comprise software for rendering a color image and recording data of said rendered image with a color measurement instrument, said instrument having an associated calibration reference.
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236. In HEI Accused Color Workflow Products, Color Toolbox is used in combination with Prepress Manager, and receives color measurements from a Prinect measurement system, such as Image Control, as a non-limiting example. Prepress Manager is used to prepare and render color images, with those rendered color images measured by Image Control. Image Control includes a calibration reference card used with its Netprofiler feature. Upon information and belief, Image Control also includes a calibration reference located internally on its measurement head component.

237. Heidelberg infringes claim 24 of the '444 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Workflow Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

238. In addition, to the extent that claim 24 of the '444 Patent requires system components provided by its customers and/or end-users, Heidelberg induces infringement of claim 24 of the '444 Patent by importing and selling the HEI Accused Color Workflow Products intended for use on a computer system, and only operable on a computer system.

239. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 24 of the '444 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 24 of the '444 Patent under 35 U.S.C. § 271(b).

Heidelberg has been and is knowingly inducing its customers and/or end users to directly

infringe at least claim 24 of the '444 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing software only operable on a computer system and providing specific requirements for supported computer systems to induce its customers and/or end users to directly infringe at least claim 24 of the '444 Patent by using the HEI Accused Color Workflow Products.

240. Heidelberg has had knowledge of the '444 Patent and RAH Color Technologies' allegations that the HEI Accused Color Workflow Products infringe claim 24 of the '444 Patent since at least November 13, 2014.

241. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXII: INFRINGEMENT OF U.S. PATENT '704 CLAIM 17

242. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 of this Complaint as though set forth in full herein.

243. Claim 17 of the '704 patent provides:

Claim 17 Preamble	A method of color reproduction comprising the steps of:
Element A	connecting two or more programmable computers in a network provided by LAN, WAN or Internet for communication using one or more network protocols, wherein at least two of said two or more programmable computers are linked to color rendering devices;
Element B	providing data for storage in memory associated with said network, said data comprising:

Element C	graphical menu elements used by one or more of said two or more programmable computers to provide a user interface on a display enabling a user to initiate execution of programs for receiving color measurements and verifying the accuracy of transforming input colors having a device independent interpretation for rendering on one or more of said color rendering devices by comparing measured colors to reference colors with respect to an error criterion;
Element D	at least one file comprising a header and tags identifying a plurality of data structures within said file, said data structures holding information related to color transformation, wherein at least one of said data structures is a three-dimensional array whose inputs are device-independent color values and each of whose outputs indicate whether the corresponding input color is inside or outside of a color gamut, wherein said file is communicable between nodes of said network; and
Element E	tonal transfer functions expressing the relationship between digital command codes and rendered density values for each of the color channels of at least one of said color rendering devices responsive to measurements and to user preferences expressed through said user interface; and
Element F	directing execution of one or more programs by one or more of said two or more programmable computers, said one or more programs comprising:
Element G	software for retouching color images or designing page layouts;
Element H	a program that receives measurement data representative of rendered output of at least one of said a color rendering devices and accumulates a record of color reproduction performance of said at least one of said color rendering devices over time;
Element I	a program that uses said measurement data for comparing measured colors to reference colors to produce color error data; and
Element J	a program for modifying rendering by said at least one of said color rendering devices responsive to said color error data.

244. “HEI Accused Prinect Products” include Prepress Manager used in combination with Pressroom Manager, Color Toolbox, PDF Toolbox, and/or Image Control; and other measurement devices and/or software that include the same or equivalent functionality described in paragraphs 245-251 of Count XXII, and paragraphs 259-262 of Count XXIII.

245. Each of Prepress Manager, Pressroom Manager, Color Toolbox, and PDF Toolbox are software products running on computers having color monitors. Image Control is a color measurement system that includes both hardware and software running on a computer system with color monitor. HEI Accused Prinect Products each provide functionality used in a color print production workflow for rendering colors, and are designed to integrate and operate with each other to provide functionality. As non-limiting examples, Prepress Manager communicates with Pressroom Manager to provide print data, and communicates with computers running Color Toolbox and/or PDF Toolbox; Pressroom Manager communicates print data to connected rendering devices (e.g., digital presses, presses, computer-to-plate devices, proofers); Pressroom Manager communicates with Image Control; Image Control communicates with Color Toolbox, as well as with up to four connected rendering devices.

246. HEI Accused Prinect Products provide data that is stored on their respective computer systems, and that is communicated to other HEI Accused Prinect Products. For example, Image Control is used to initiate and receive color measurements, which it then provides to Color Toolbox for analysis. Color Toolbox validates that colors are transformed (using ICC profiles; ICC profiles transform digital codes from an input device to device-independent PCS color values to coordinates useable by an output device) and rendered accurately based on those measurements by comparing the measurements to known reference color values to generate delta E color error data. If the color error is within acceptable limits, then colors are being accurately rendered. Additionally, both Image Control and Color Toolbox store color measurements for reporting and long-term analysis of rendering device quality.

247. In HEI Accused Prinect Products, Image Control also generates delta E color error data by comparing color values as rendered and measured to the expected values for those

same colors. Based on the delta E data, Image Control adjusts the inking characteristics of connected rendering devices.

248. In HEI Accused Prinect Products, at least Color Toolbox creates ICC profiles, and Prepress Manager uses ICC profiles. ICC profiles are files that have a header followed by tagged elements that identify data structures, such as BToA-type elements used by color output devices (e.g., presses, proofers). BToA-type elements include one dimensional output tables corresponding to tonal transfer functions used at least in part to translate PCS colors to digital device codes that control how much ink is deposited during rendering. In addition, at least the “Calibration Tool” within Prinect Color Toolbox provides “central management [for] . . . process calibration of the print process.” This entails generating and storing linearization curves (corresponding to tonal transfer functions) responsive to measurements of tonal gradation samples rendered for each colorant channel of a device. Measurement charts for generation of linearization curves are further based on user preferences (e.g., type of chart used, measurement conditions). The process control ensures that the device is maintained in a calibrated state; the calibrated state serves as a reference for generation, and quality assurance, of profiles by Color Toolbox.

249. Profiles for color output devices also include a gamutTag data structure that uses PCS values (which are device-independent values, such as $L^*a^*b^*$ or XYZ) as inputs; the gamutTag outputs either a 0 (indicating that an input is in-gamut) or a non-zero (indicating an input is out of gamut). These ICC profiles (or constituent data structures) can be communicated over a network, for example between the Color Toolbox computer and the Prepress Manager computer.

250. In HEI Accused Prinect Products, Color Toolbox creates ICC profiles based on measurements provided by Image Control. When creating a profile, Color Toolbox accounts for various user preferences, such as the type of paper, the type of printing process, and the type of ink handling (e.g., GCR).

251. In HEI Accused Prinect Products, both Prepress Manager and PDF Toolbox include imposition features. Imposition entails setting up how images (and other printed elements) are arranged on a page for final production.

252. Heidelberg infringes claim 17 of the '704 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Prinect Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

253. In addition, Heidelberg induces infringement of claim 17 of the '704 Patent by importing and selling the HEI Accused Prinect Products for use by its customers and/or end-users.

254. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 17 of the '704 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 17 of the '704 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 17 of the '704 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other

forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 17 of the '704 Patent by using the HEI Accused Prinect Products.

255. Heidelberg has had knowledge of the '704 Patent and RAH Color Technologies' allegations that the HEI Accused Prinect Products infringe claim 17 of the '704 Patent since at least November 13, 2014.

256. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXIII: INFRINGEMENT OF U.S. PATENT '704 CLAIM 18

257. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 242-256 of this Complaint as though set forth in full herein.

258. Claim 18 of the '704 patent provides:

Claim 18 Preamble	The method according to claim 17
Element A	wherein at least one of said color rendering devices is a press linked to one of said programmable computers,
Element B	said method further comprising the step of utilizing a multi-dimensional color transformation to perform color matching between the color rendering device linked to another of said programmable computers and said press in accordance with a criterion for color error and a relationship between the color gamuts of said press and said another rendering device.

259. In HEI Accused Prinect Products, Prepress Manager and Pressroom Manager communicate print data to rendering devices, including analog presses (including direct imaging presses), digital presses, computer-to-plate devices, and hard copy proofers.

260. In a proofing workflow as an example, an ICC profile for a final rendering device (e.g., press) is used for simulating, on a proofing device, color reproduction by the final rendering device. ICC profiles for presses include AToB and BToA-type data structures; these data structures define multidimensional transformations from CMYK colorant values for the press to device-independent Profile Connection Space (“PCS”) values, and from PCS values to device-dependent CMYK coordinates to control rendering by the press. When proofing, CMYK values destined for the press are transformed through the AToB data structure to generate PCS values; PCS values are then converted through the BToA data structure of the proofer for rendering the simulation. Mapping colors to the gamut of the proofing device is managed in Color Toolbox using gamut data, such as that used with the gamutTag or gamut descriptor data structures of the press and proofer.

261. Additionally, HEI Accused Prinect Products can be used in a proofing workflow that utilizes DeviceLink profiles. DeviceLink profiles are created by concatenating data structures of two profiles (e.g., AToB transform for a press with BToA transform for a proofer) to generate a single, multidimensional transform, with each profile (including the first, second, and DeviceLink profile) verified for accuracy (based on delta E error) using Color Toolbox’s Quality Monitor feature. During preparation and creation of a DeviceLink profile, Color Toolbox will apply gamut mapping based on preferences for the proofing workflow.

262. In HEI Accused Prinect Products, Color Toolbox validates the accuracy of color reproduction (e.g., as rendered by a proofer) by comparing measurements of rendered colors to known reference values for those colors to generate delta E color error data. If the color error is within acceptable limits, then colors are being accurately rendered.

263. Heidelberg infringes claim 18 of the '704 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Prinect Products, including its use in relation to product testing and improvement responsive to user feedback, and demonstration at trade shows, sales facilities, customer sites, and training/tutorial videos.

264. In addition, Heidelberg induces infringement of claim 18 of the '704 Patent by importing and selling the HEI Accused Prinect Products for use by its customers and/or end-users.

265. Upon information and belief, Heidelberg's customers and/or end users have directly infringed and are directly infringing each and every claim limitation of at least claim 18 of the '704 Patent. Heidelberg actively induces customers and users to directly infringe each and every claim limitation of at least claim 18 of the '704 Patent under 35 U.S.C. § 271(b). Heidelberg has been and is knowingly inducing its customers and/or end users to directly infringe at least claim 18 of the '704 Patent with the specific intent to encourage such infringement, and knowing that the acts induced constitute patent infringement. Heidelberg's inducement includes, for example, providing extensive training and technical guides, product data sheets, demonstrations, software and hardware specifications, installation guides, and other forms of support (e.g., maintenance contracts, consulting services, system integration) that induce its customers and/or end users to directly infringe at least claim 18 of the '704 Patent by using the HEI Accused Prinect Products.

266. Heidelberg has had knowledge of the '704 Patent and RAH Color Technologies' allegations that the HEI Accused Prinect Products infringe claim 18 of the '704 Patent since at least November 13, 2014.

267. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXIV: INFRINGEMENT OF U.S. PATENT '560 CLAIM 46

268. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 of this Complaint as though set forth in full herein.

269. Claim 46 of the '560 patent provides:

Claim 46	An apparatus for measurement of color rendered on media comprising:
Element A	an illumination source for directing light to the media;
Element B	optics for collecting light of said illumination source reflected from said media in which at least said optics are moveable with respect to said media, wherein said media is scanned in two dimensions;
Element C	at least a spectrograph for producing data representative of said light collected by said optics, wherein said optics diminish the contribution of specular reflections in said light collected by said optics;
Element D	an interface providing transmission of said data representative of said light to a processor or a computer system; and
Element E	one or more programs executable by said processor or computer system which produce one or more color transformations responsive to said data representative of said light and to calibration data of said apparatus, wherein said one or more programs produce a color conversion which is usable for compensating for change in viewing conditions, said one or more color transformations and said color conversion being useable to improve rendering.

270. "HEI Accused Color Measurement Systems" include Heidelberg Prinect Axis Control used in combination with Prinect Color Toolbox, and other measurement devices and software that include the same or equivalent functionality described in paragraphs 271-275 of

Count XXIV, paragraph 281 of Count XXV, paragraph 287 of Count XXVI, and paragraphs 293-294 of Count XVII.

271. HEI Accused Color Measurement Systems have a spectrograph that is used to measure color rendered on media (e.g., colors printed on paper) by directing light from a light source (e.g., LED) to the media.

272. HEI Accused Color Measurement Systems have optics (e.g., lenses, mirrors, fiber optics) that move in two dimensions to collect light reflected from the media. For example, Prinect Axis Control moves in both the horizontal and vertical directions to make measurements.

273. HEI Accused Color Measurement Systems have optics in a $45^{\circ}/0^{\circ}$ configuration that reduces the amount of specularly reflected light that is collected by the optics.

274. HEI Accused Color Measurement Systems can transmit color measurement data to a computer system (e.g., Prinect Press Center or another computer) through an interface. For example, HEI Accused Color Measurement Systems supply measurement data to Prinect Color Toolbox, which is installed on another computer system. Color Toolbox generates ICC-compliant color profiles using the measurements provided by the HEI Accused Color Measurement Systems that include tagged elements that have defined data structures used for color transformations, such as “AToB0” and “BToA0” tags, and a “chromaticAdaptationTag.” To ensure accurate ICC profiles (which are based on color measurements), HEI Accused Color Measurement Systems are calibrated on a regular basis to ensure accurate measurements.

275. The “chromaticAdaptationTag” indicates the presence of a data structure within the profile used for chromatic adaptation transforms. Such transforms are used to compensate for changes in viewing conditions (e.g., converting input colors having a D65 white point to output color to be viewed under D50 illumination).

276. Heidelberg infringes claim 46 of the '560 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Measurement Systems.

277. Heidelberg has had knowledge of the '560 Patent and RAH Color Technologies' allegations that the HEI Accused Color Measurement Systems infringe claim 46 of the '560 Patent since at least November 13, 2014.

278. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXV: INFRINGEMENT OF U.S. PATENT '560 CLAIM 51

279. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 268-278 of this Complaint as though set forth in full herein.

280. Claim 51 of the '560 patent provides:

Claim 51	The apparatus according to claim 46 further comprising one or more programs executable by said processor or computer system which use said data representative of said light to calculate errors of color reproduction on said media.
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281. HEI Accused Color Measurement Systems use measurement data to calculate ΔE color error data. Additionally, measurements from HEI Accused Color Measurement Systems are used by Color Toolbox to generate ΔE color error data.

282. Heidelberg infringes claim 51 of the '560 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Measurement Systems.

283. Heidelberg has had knowledge of the '560 Patent and RAH Color Technologies' allegations that the HEI Accused Color Measurement Systems infringe claim 51 of the '560 Patent since at least November 13, 2014.

284. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXVI: INFRINGEMENT OF U.S. PATENT '560 CLAIM 54

285. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 268-278 of this Complaint as though set forth in full herein.

286. Claim 54 of the '560 patent provides:

Claim 54	The apparatus according to claim 46 wherein said one or more programs further enable graphical representation of the gamuts of one or more color rendering devices.
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287. HEI Accused Color Measurement Systems communicate with Color Toolbox. Color Toolbox provides graphical representations of color gamuts for rendering devices (e.g., presses).

288. Heidelberg infringes claim 54 of the '560 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Measurement Systems.

289. Heidelberg has had knowledge of the '560 Patent and RAH Color Technologies' allegations that the HEI Accused Color Measurement Systems infringe claim 54 of the '560 Patent since at least November 13, 2014.

290. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

COUNT XXVII: INFRINGEMENT OF U.S. PATENT '560 CLAIM 55

291. RAH Color Technologies incorporates by reference the allegations set forth in paragraphs 1-51 and 268-278 of this Complaint as though set forth in full herein.

292. Claim 55 of the '560 patent provides:

Claim 55	The apparatus according to claim 46 wherein said one or more programs produce a data structure whose inputs are color values and whose outputs indicate whether said color values are either in or out of gamut for a device.
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293. HEI Accused Color Measurement Systems communicate with Color Toolbox to generate ICC-compliant color profiles for rendering devices (e.g., CMYK press, proofer, or computer-to-plate device).

294. These profiles include tagged elements, such as the “gamutTag,” which corresponds to a data structure that uses Profile Connection Space color values as inputs, and outputs values indicating whether an input is in-gamut or out-of-gamut for a given rendering device.

295. Heidelberg infringes claim 55 of the '560 Patent when it makes, imports, uses, sells and offers for sale the HEI Accused Color Measurement Systems.

296. Heidelberg has had knowledge of the '560 Patent and RAH Color Technologies' allegations that the HEI Accused Color Measurement Systems infringe claim 55 of the '560 Patent since at least November 13, 2014.

297. As a direct and proximate result of Heidelberg's acts of patent infringement, RAH Color Technologies has been and continues to be injured and has sustained, and will continue to sustain, damages.

WILLFUL INFRINGEMENT

298. Heidelberg has infringed and continues to infringe the above identified claims of each of the Patents-in-Suit despite its knowledge of the Patents-in-Suit and its knowledge that at least HEI Accused Color Products, HEI Accused Print Workflow Systems, HEI Accused Color

Workflow Products, HEI Accused Prinect Products, and HEI Accused Color Measurement Systems were and are using the technology claimed by the Patents-in-Suit since November 13, 2014; Heidelberg's failure to raise any non-infringement or invalidity argument before litigation; and the objectively high likelihood that its acts constitute patent infringement.

299. Heidelberg's infringement of the Patents-in-Suit is willful and deliberate, entitling RAH Color Technologies to enhanced damages under 35 U.S.C. § 284.

300. Heidelberg's willful infringement and unwillingness to enter into license negotiations with RAH Color Technologies make this an exceptional case such that RAH Color Technologies should be entitled to recover its attorneys' fees and costs incurred in relation to this matter pursuant to 35 U.S.C. § 285.

JURY DEMAND

RAH Color Technologies demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff RAH Color Technologies requests that this Court enter judgment in its favor and against Heidelberg as follows:

- A. Adjudging, finding, and declaring that Heidelberg has infringed of the above-identified claims of each of the Patents-in-Suit under 35 U.S.C. § 271;
- B. Awarding the past and future damages arising out of Heidelberg's infringement of the Patents-in-Suit to RAH Color Technologies in an amount no less than a reasonable royalty, together with prejudgment and post-judgment interest, in an amount according to proof;
- C. Adjudging, finding, and declaring that Heidelberg's infringement is willful, and awarding enhanced damages and fees as a result of that willfulness under 35 U.S.C. § 284;

D. Adjudging, finding, and declaring that this is an “exceptional” case pursuant to 35 U.S.C. § 285;

E. Awarding attorney’s fees, costs, or other damages pursuant to 35 U.S.C. §§ 284 or 285 or as otherwise permitted by law; and

F. Granting RAH Color Technologies such other further relief as is just and proper, or as the Court deems appropriate.

January 10, 2019

Respectfully submitted,

By: /s/ Alison Aubry Richards

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