UNITED STATES DISTRICT COURT DISTRICT OF MASSACHUSETTS

Rampage LLC,

Plaintiff,

Civil Action No. : 1:16-cv-11681-ADB

v.

FIRST AMENDED COMPLAINT

Hewlett Packard Company and HP Inc.,

Defendants.

Plaintiff, Rampage LLC, for its Complaint against the defendants Hewlett Packard Company and HP Inc., allege as follows:

PARTIES

- 1. Plaintiff, Rampage LLC, is a Massachusetts limited liability company having a principal place of business at 3 Abbott Avenue, Sharon, MA 02067.
- 2. On information and belief, defendant, Hewlett Packard Company, is a Delaware corporation having a principal place of business at 3000 Hanover Street, Palo Alto, CA 94304.
- 3. On information and belief, defendant, HP Inc., is a Delaware corporation having a principal place of business at 1501 Page Mill Road, Palo Alto, CA 94304.

JURISDICTION AND VENUE

- 4. This action arises under the patent laws of the United States, 35 U.S.C. § 1 et seq.
- 5. This Court has subject matter jurisdiction over this dispute pursuant to 28 U.S.C. §§1331 and 1338(a).
- 6. This Court has personal jurisdiction over defendants based upon their contacts with this forum, including their offer to sell and/or sale of infringing digital presses within the Commonwealth of Massachusetts and throughout the United States.
- 7. Venue is proper in this judicial district pursuant to 28 U.S.C. §§1391(b) and 1400(b).

GENERAL FACTS

- 8. Plaintiff is the sole owner of U.S. Patent No. 9,053,410 entitled "Raster Image Processor With Printhead Profile Compensation For a Multi-Level Digital Printing Machine" that issued on June 9, 2015, and names Mitchell J. Bogart as the inventor (hereinafter the "Bogart Patent"). A copy of the Bogart Patent is attached hereto as Exhibit A.
- 9. The Bogart Patent is valid and enforceable.
- 10. On information and belief, defendants have and continue to make, use, test, offer to sell, and/or sell within the United States a digital press under the mark PageWide (hereinafter the "Accused Digital Press").
- 11. On information and belief, the Accused Digital Press is manufactured with and uses a software raster image processor supplied by Global Graphics SE under the mark Harlequin Host Renderer 11 (hereinafter the "Accused RIP").

- 12. Attached as Exhibit B hereto is a copy of a brochure by Global Graphics for the Accused RIP.
- 13. Attached as Exhibit C hereto is a copy of a Press Release by Global Graphics stating that the "Harlequin Host Renderer 11 is an essential component of the digital front ends that power high-performance devices such as HP PageWide Presses..." (hereinafter the "Press Release").
- 14. On June 16, 2016, plaintiff sent defendants a certified letter along with a copy of the Bogart Patent and the Press Release and requested it to confirm that the Accused Digital Press did not employ the Accused RIP (hereinafter the "Letter"). A copy of the Letter is attached hereto as Exhibit D The Letter was received by defendants. Plaintiff has not received a response to the Letter from defendants.
- 15. Upon information and belief, the Accused RIP has four different types of screening methods that can be selected by the operator of a digital press, namely, "Harlequin multi-level screening", "Harlequin Dispersed Screening", "Harlequin Cross Modulated" and "Harlequin Precision Screening." Upon information and belief, the "Harlequin multi-level screening" method performs multi-level screening when executed on the Accused Digital Press (hereinafter the "Accused Process").
- 16. In that the Accused RIP is a software product, plaintiff (like other owners of patents directed to software inventions) does not have access to the source code of the Accused RIP. Plaintiff will never have the opportunity to review the source code of the Accused RIP (and thus the Accused Process) except by discovery in this action and/or in a pending action in this Court between plaintiff and Global Graphics. As such, unlike most pure mechanical products, plaintiff cannot examine the Accused RIP to determine

exactly how the software is written and the Accused Process operates.

- 17. Upon information and belief, Global Graphics developed an initial method for multi-level screening that had significant problems resulting in artifacts in the printed image (hereinafter the "Screening Problem").
- 18. Attached as Exhibit E is a document published by Global Graphics entitled "Halftone Screen Optimization for Single-Pass Inkjets" dated February 2016 (the "White Paper"). Pages 3 and 4 of the White Paper explain the Screening Problem as follows:

Most printing software assumes you can print a perfect grid of dots. In practice on an inkjet press there are often variations between the control system's aim point for an ink drop and where it actually lands. In addition the interaction of the ink drops with the media may introduce variations. For instance aqueous inks are absorbed into the surface of papers to differing extents depending on the coating or primer/bonding agent used, and how the driers operate to evaporate the water in the ink. Likewise UV-cured inks will behave differently on various absorbent or non-absorbent substrates, with variations such as the temperature/viscosity of the ink, whether a corona pre-treatment is applied, whether or not there is inter-color pinning (ie partial UV curing to "freeze" the dots), and the interval before the main UV cure exposure. All these variables, in combination or separately, may lead to changes in halftone dots' size or shape away from the intended ideal, which in turn might lead to artifacts and errors that are visible to the naked eye in the finished print.

- 19. Global Graphics shared the Screening Problem with Mitchell Bogart.
- 20. Mitchell Bogart invented a solution to the Screening Problem that he provided to Global Graphics under confidentiality. The solution has two parts that may be practiced alone or together, but ideally together to obtain the highest quality printed image. First, change the size of the tonal sub-ranges based upon density measurements of the actual dot sizes for each colorant. Second, overlap each tonal sub-range by a small amount, for example two percent (hereinafter the "MLS Solution").

- 21. At Pages 5 and 6 of the White Paper, Global Graphics explains its solution to the Screening Problem as follows:
 - Global Graphics can compensate for this, by measuring the printed patterns from print heads and the results of stitching from multiple heads. By measuring the characteristics of the drop generation and interaction with the substrate, it is possible to fine-tune the halftone dot shapes and placement within the Multi-Level Screening to mitigate unwanted variables. The result is print that is visually largely error-free, because the optimized Multi-Level Screening compensates for and masks the effect of errors in the print process... It will also be necessary to fine-tune the use of different drop sizes from the grayscale print heads and in particular to control and adjust the way different sizes are overlapped in the transitions between tones.
- 22. Upon information and belief, Global Graphics never sold a product for a digital press that included a multi-level screening option until after it learned of the MLS Solution provided to it by Mitchell Bogart.

COUNT I - PATENT INFRINGEMENT UNDER 35 U.S.C. §271(a) - CLAIM 1 OF U.S. PATENT NO. 9,053,410

- 23. Plaintiff re-alleges each and every allegation set forth in Paragraphs 1-22 as if fully alleged herein.
- 24. Attached as Exhibit F are claim charts for claims 1 and 10 of the Bogart Patent with plaintiff's initial contentions of direct infringement by defendants as they currently exist based upon public information disseminated by Global Graphics (the "Claim Chart"). Claim 1 is directed to a method and claim 10 is directed to a system.
- 25. Upon information and belief, and as shown by the Claim Chart for claim 1 and realleged herein, each and every limitation of claim 1 of the Bogart Patent, or their equivalent, is used and/or practiced by the Accused Process when executed on the

Accused Digital Press.

- 26. Upon information and belief, the Accused Process when executed on the Accused Digital Press creates first and second tonal sub-ranges corresponding to the first and second printable tone levels, respectively, for each colorant, as recited by step (a) of claim 1. Upon information and belief, each of the first and second tonal sub-ranges of the Accused Process inherently have beginning and ending boundary tone values as recited by step (a) of claim 1. Upon information and belief, each of the first and second tonal sub-ranges of the Accused Process inherently define first and second tone range spans as recited by step (a) of claim 1. Upon information and belief, each of the first and second tonal sub-ranges of the Accused Process inherently define a first transition tone value as recited by step (a) of claim 1. Upon information and belief, at some point during the process of creating the first and second tonal ranges, the first transition tone value of the Accused Process is or can be both the ending boundary tone value of the first tonal sub-range and the beginning boundary tone value of the second tonal sub-range as recited by step (a) of claim 1.
- 27. Upon information and belief, the Accused Process when executed on the Accused Digital Press shifts (changes or adjusts) the position of the first transition tone value of the Accused Process so that the first tone range span of the Accused Process is different from the second tone range span of the Accused Process as recited by step (b) of claim 1.
- 28. Upon information and belief, the Accused Process when executed on the Accused Digital Press produces a modified output tone value for the first and second tonal subranges of the Accused Process by first and second tone modification functions of the Accused Process as recited by step (c) of claim 1.

- 29. Upon information and belief, the Accused Process when executed on the Accused Digital Press produces a single multi-bit output value corresponding to the first colorant for each printable position on the page by using the modified output tone values of the first and second tone modification functions of the Accused Process as inputs to a bilevel half-toning algorithm of the Accused Process, as recited by step (d) of claim 1.
- 30. Defendants' use and practice of the Accused Process on the Accused Digital Press within the United States directly infringes claim 1 of the Bogart Patent in violation of 35 U.S.C. §271(a).
- 31. Defendants' direct infringement of claim 1 of the Bogart Patent has caused and continues to cause plaintiff irreparable harm.
- 32. Defendants' direct infringement of claim 1 of the Bogart Patent has caused and continues to cause plaintiff monetary damage.

COUNT I - PATENT INFRINGEMENT UNDER 35 U.S.C. §271(a) - CLAIM 10 OF U.S. PATENT NO. 9,053,410

- 33. Plaintiff re-alleges each and every allegation set forth in Paragraphs 1-32 as if fully alleged herein.
- 34. Upon information and belief, and as shown by the Claim Chart for claim 10 and re-alleged herein, when the Accused RIP is installed on the Accused Digital Press or when the Accused Process is running on the Accused Digital Press, each and every limitation of claim 10 of the Bogart Patent, or their equivalent, is present in the Accused Digital Press.

- 35. Upon information and belief, the Accused Digital Press has a computing device as recited by claim 10.
- 36. Upon information and belief, the Accused Digital Press has a memory device that is electrically connected with the computing device as recited by claim 10.
- 37. Upon information and belief, the Accused Digital Press, with the Accused Product installed thereon, has a screening module as recited by claim 10.
- 38. Upon information and belief, the screening module of the Accused Digital Press has a tone sub-range module as recited by claim 10. Upon information and belief, the tone sub-range module of the Accused Digital Press is configured to create first, second, and third tonal sub-ranges corresponding to the first, second, and third printable tone levels, respectively, of the Accused Digital Press. Upon information and belief, each of the tonal sub-ranges of the Accused Digital Press inherently define beginning and ending boundary tone values specifying where that drop size is used. Upon information and belief, the creation and presence of the first, second, and third tonal sub-ranges by the Accused Digital Press necessarily and inherently define first, second and third tone range spans. Further, upon information and belief and during processing of the tonal sub-ranges by the Accused Digital Press and prior to any inherent overlapping, the first, second, and third tonal sub-ranges of the Accused Digital Press necessarily and inherently define a first transition to be both the ending boundary tone value of the first tonal sub-range of the Accused Digital Press and the beginning boundary tone value of the second tonal subrange of the Accused Digital Press and a second transition tone value to be the value of both the ending boundary tone value of the second tonal sub-range of the Accused Digital Press and the beginning boundary tone value of the third tonal sub-range of the Accused

Digital Press.

- 39. Upon information and belief, the screening module of the Accused Digital Press has a shifting module as recited by claim 10. Upon information and belief, the shifting module of the Accused Digital Press is configured to shift (change or adjust) the position of the first and second transition tone values of the Accused Digital Press so that the first tone range span of the Accused Digital Press is different from the second and third tone range spans of the Accused Digital Press.
- 40. Upon information and belief, the screening module of the Accused Digital Press has a pixel processing module as recited by claim 10. Upon information and belief, the pixel processing module of the Accused Digital Press has a tone modification submodule configured to produce a modified output tone value for said first, second, and third tonal sub-ranges of the Accused Digital Press by first, second, and third tone modification functions, respectively, of the Accused Digital Press. Upon information and belief, the pixel processing module of the Accused Digital Press has an output submodule configured to produce a single multi-bit output value corresponding to the first colorant for each printable position on the page of the Accused Digital Press by using the modified output tone values from the first, second, and third tone modification functions of the Accused Digital Press as inputs to at least one bi-level half-toning algorithm.
- 41. Defendants' manufacture, use, offer to sell, and/or sale of the Accused Digital Press within the United States directly infringes claim 10 of the Bogart Patent in violation of 35 U.S.C. §271(a).
- 42. Defendants' direct infringement of claim 10 of the Bogart Patent has caused and continues to cause plaintiff irreparable harm.

43. Defendants' direct infringement of claim 10 of the Bogart Patent has caused and continues to cause plaintiff monetary damage.

REQUESTED RELIEF

Plaintiff requests this Court to enter judgment in favor of plaintiff against the defendant on the above counts and grant it the following relief:

- 1. Pursuant to 35 U.S.C. §283, an Order that defendants be preliminary and permanently enjoined from using and/or practicing the Accused Process and any other process that infringes U.S. Patent No. 9,053,410 within the United States and/or its territories;
- 2. Pursuant to 35 U.S.C. §283, an Order that defendants be preliminary and permanently enjoined from making, using, and/or selling any digital press using the Accused RIP or the Accused Process and any other digital press that infringes U.S. Patent No. 9,053,410 within the United States and/or its territories;
- 3. Pursuant to 35 U.S.C. §283, an Order that defendants be preliminary and permanently enjoined from making, using, offering to sell, and selling the Accused Digital Press and any other digital press that infringes U.S. Patent No. 9,053,410 within the United States and/or its territories;
- 4. Pursuant to 35 U.S.C. §284, that defendants pay plaintiff actual damages as may be proved at trial and in no event less than a reasonable royalty;
 - 5. Pursuant to 35 U.S.C. §284, that plaintiff be awarded interest on damages;
 - 6. Pursuant to 35 U.S.C. §284, that plaintiff be awarded its costs; and
 - 7. Such other damages and relief as this Court deems equitable and just.

REQUEST FOR A JURY

Plaintiff hereby requests a jury on all issues triable by a jury.

Dated: 08-22-2016

Respectfully submitted,

Rampage LLC

By its Attorney,

/s/ Steven N. Fox

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CERTIFICATE OF SERVICE

I hereby certify that a true copy of the above document was filed through the ECF system and will be sent electronically to registered participants as identified on the Notice of Electronic Filing, and paper copies will be sent by first class mail, postage prepaid, to those indicated as non-registered participants on August 22, 2016.

/s/ Steven N. Fox Steven N. Fox