IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POLAROID CORPORATION	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 06-738 (SLR)
	)	
HEWLETT-PACKARD COMPANY,	)	**REDACTED VERSION**
	)	
Defendant.	)	

POLAROID CORPORATION'S OPENING BRIEF IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT OF INFRINGEMENT OF CLAIMS 1-3 OF U.S. PATENT NO. 4,829,381

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Original Filing Date: May 16, 2008
Redacted Filing Date: May 23, 2008
2331349

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NATURE AND STAGE OF THE PROCEEDING

Plaintiff Polaroid Corporation ("Polaroid") brought suit against Defendant Hewlett-Packard Company ("HP") for infringing Claims 1–3 and 7–9 of Polaroid's U.S. Patent No. 4,829,381 ("the '381 patent"). The '381 patent discloses and claims an invention for improving or enhancing a digital image. The invention in the '381 patent enhances the appearance of digital pictures taken with a camera and then subsequently viewed on the camera, a computer, or in a hardcopy print from a printer. The invention in the '381 patent enhances the image by altering the contrast at the specific areas of the image that need enhancing; in particular, the dark areas are made lighter and the light areas are made darker. This enhancement draws out detail that otherwise would be lost in digital images. Pursuant to the Court's September 6, 2007 Amended Scheduling Order claim construction briefing is complete. Fact discovery closed on February 1, 2008, and expert discovery closed on May 9, 2008. Polaroid hereby moves for summary judgment that HP literally infringes Claims 1–3 of the '381 patent.

SUMMARY OF ARGUMENT

1. The '381 patent covers a novel contrast enhancement system that uses an algorithm to transform or change pixels depending on the brightness of nearby pixels. Claims 1 and 3 cover the algorithm using claim limitations written in means-plus-function format. As such they cover the structure in the patent specification that performs the claimed function and equivalents. 35 U.S.C. § 112, ¶ 6. HP employs algorithms for contrast enhancement in certain of its products that it calls Local Area Contrast Enhancement ("LACE"). These HP products ("LACE Products") are the accused products and they infringe Claims 1 and 3 of the '381 patent under Polaroid's proposed claim construction in violation of 35 U.S.C. § 271(a) . Each element of Claims 1 and 3 are literally infringed by each LACE Product because the relevant structure in each product performs the identical recited function and uses identical or equivalent structure to

that disclosed in the specification of the '381 patent. *See Applied Medical Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 (Fed. Cir. 2006) (citing *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1320 (Fed. Cir. 2003).

2. Each element of Claim 2, an apparatus claim that does not contain a means-plus-function element, also is literally infringed by each HP product accused of infringement because the claim limitations are present in each product. *See*, *e.g.*, *Dawn Equip. Co. v. Ky. Farms, Inc.*, 140 F.3d 1009, 1015 (Fed. Cir. 1998)

STATEMENT OF FACTS

A. Image Processing Background.

A digital image is created when an image sensing device is exposed to light rays emitted or reflected from an object or scene. J.A. Ex. B, Agouris Op. Rpt. at p. 8.[1] The image sensing device typically consists of a pattern of very small image sensing elements (often referred to as "pixels") that are arranged in a two dimensional array of rows and columns. J.A. Ex. A, '381 Pat., col. 3, lines 13–18; J.A. Ex. B, Agouris Op. Rpt. at pp. 8–9. When the light hits each pixel element within the sensing device, the pixel element produces an electronic signal. J.A. Ex. B, Agouris Op. Rpt. at p. 9. The electronic signal for each pixel contains information about the strength or intensity of light hitting that pixel, as well as information specifying the location (row and column) of that individual pixel within the array of pixels that comprise a digital image. *See* J.A. Ex. A,'381 Pat, col. 3, lines 19–20; J.A. Ex. B, Agouris Op. Rpt. at p. 9; Ex. 3 to Agouris Op. Rpt. at pp. 4–5 (J.A. Ex. B).

[1] To avoid filing multiple copies of the same document in support of Polaroid's summary judgment motions, documents common to more than one summary judgment motion are contained in a Joint Appendix and will be cited as "J.A. Ex. __." Documents related only to the instant motion are contained in a separate Appendix and will be cited as "Ex. __."

[redacted]

When an image is being captured in black and white, the electronic signal corresponding to each pixel in the image has just one intensity value representing brightness at that location. Ex. 3 to Agouris Op. Rpt. at p. 4 (J.A. Ex. B). When an image is being captured in color, the color is often represented using three color values, red, green, and blue. *Id.* at p. 62. However, each individual pixel can only capture one color of light at a time. J.A. Ex. B, Agouris Op. Rpt. at p. 9. Consequently, an individual pixel cannot simultaneously capture the amount of red, green, and blue light hitting that individual pixel element in the capture device. *Id*. For that reason, capture devices for color images often use filter overlays that allow the spectrum of light associated with only one color to hit each pixel element. J.A. Ex. A, '381 Pat., col. 3, lines 25–29; J.A. Ex. B, Agouris Op. Rpt. at p. 9. Multiple filters are used to alternate between the colors sought to be captured. J.A. Ex. A, '381 Pat., col. 3, lines 29–32. Thus, a row of three pixel elements might contain values associated with red for the first pixel, green for the next pixel, and blue for the third pixel. J.A. Ex. B, Agouris Op. Rpt. at p. 9.

Although an individual pixel element only captures the value associated with one particular color of light, the amount of the other two colors of light can be extrapolated from the level of the other colors of light captured from surrounding pixels. *Id*. As a result, for color images in the red-green-blue (RGB) color space, an individual pixel element may be associated with red, green, and blue pixel intensity values even if that pixel element itself only received light from the spectrum associated with one color. *Id*.

The intensity values for a pixel may also be converted to other values, such as luminance and chrominance. J.A. Ex. A, '381 Pat., col. 3, lines 35–38; J.A. Ex. B, Agouris Op. Rpt. at p. 10. Luminance is a measure of brightness associated with a specific pixel location, and may be calculated based on the weighted average of the three color intensity values at each pixel

[redacted]

location. *Id*. at lines 40–42; p. 10. Chrominance simply is the difference between one color and a reference color of the same brightness and chromaticity. J.A. Ex. B, Agouris Op. Rpt. at p. 10.

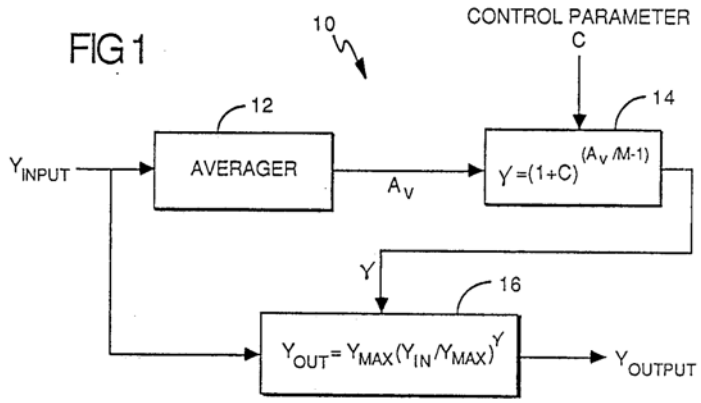
Thus, the electronic information signals associated with a specific pixel can contain intensity values associated with color, luminance, or chrominance, and do contain the information necessary to identify where each pixel is located within the pixel array comprising the digital image.

B. Polaroid's '381 Patent.

Drs. Woo-Jin Song and Donald S. Levinstone are the inventors of the '381 patent. J.A. Ex. A, '381 Pat., cover page. The '381 patent discloses and claims their invention for a system and method that recovers loss of brightness detail in areas of a digital image that are either too dark or too light. *Id.*, col. 1, lines 48–50. Their approach alters contrast based on brightness conditions at specific areas of a digital image — i.e., the lightness or darkness of areas of the image — rather than applying a global correction to the entire image. *Id.*, col. 2, lines 57–63. Consequently, the invention of the '381 patent transforms a digital image on a pixel-by-pixel basis so that contrast is altered in localized areas of an image that need correction in a manner consistent with the localized area (i.e., the dark areas are made lighter and the light areas are made darker). *Id.*, Abstract, col. 2, lines 57-62.

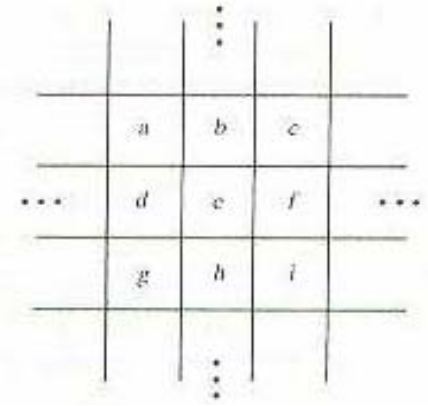
Figure 1 of the Patent is an illustrated embodiment of the patented system for transforming images:

[redacted]



In Figure 1, Y_{INPUT} represents the electronic information signals associated with the pixels that define the digital image being transformed, which enter the patented system one after the other. *Id.*, col. 3, lines 1–6. Information associated with the electronic information signals Y_{INPUT} are sent to both the averager **12** and the Y_{OUT} equation **16**.

The first step in the transformation process is to define a window, local neighborhood, or plurality of pixels that includes the pixel to be transformed. *Id.*, col. 3, lines 59–61. Although not required to be centered around the pixel to be transformed, *see id.*, col. 3, lines 63–67, this window is typically a group of pixels where the pixel to be transformed is located in the center of the window. Ex. 4 to Agouris Op. Rpt. at pp. 33–34 (J.A. Ex. B). For example, the figure below shows a sample 3x3 neighborhood of pixels (a-i) surrounding pixel "e," which is the pixel to be transformed:



[redacted]

J.A. Ex. B, Agouris Op. Rpt. at p. 11. In this example, the window of pixels moves every time a new pixel is being processed so that the pixel to be transformed is always at the center of the window. *Id.*

The intensity values associated with the group of pixels are then averaged by the averager **12** as shown in Figure 1 above. J.A. Ex. A, '381 Pat., col. 3, lines 59–61. The '381 patent teaches that the averaging step is performed by a low pass filter or block averager. *Id.*, col. 3, line 61–col. 4, line 25. In either case, the pixel values contained within the window are used to calculate one average for that window and the value becomes associated with the pixel to be transformed. *Id.*, col. 3, line 59–col. 4, line 16.

The next step in the process is to use the average value obtained for the window and associated with the pixel to be transformed in the previous step to calculate gamma (γ) in accordance with the algorithm:

$$\gamma=(1+C)^{(Av/M-1)}$$

See id., col. 4, lines 26–55. In the algorithm: (1) C is a constant that is chosen based on the desired amount of correction, *id.*, col. 4, lines 51–55, col. 6, lines 30–42 (disclosing a preferred value of 1); (2) A_v is the average value calculated by the averager **12**, *id.*, col.4, lines 26–30; and (3) M is a number within the dynamic range of the image to be transformed, which is 0–255 for an 8-bit image. *See id.*, col. 4, lines 34–50 (disclosing a preferred value of 128).

The final step is to use γ to select one of the many transfer functions that could be imposed in the transfer function imposing circuit **16** to determine the output pixel value (Y_{OUT}) as follows:

$$Y_{OUT} = Y_{MAX}(Y_{IN}/Y_{MAX})^{\gamma}$$

See id., col. 4, lines 56–65. In this algorithm: (1) Y_{MAX} is the maximum value of the dynamic range used by the image (255 for an 8-bit image), *Id.*, col. 4, lines 66–68; (2) Y_{IN} is an intensity

[redacted]

value associated with the pixel to be transformed in the original image contained within the Y_{INPUT} electronic information signal, *see id.*, col. 4, lines 56–65; and (3) Y_{OUT} is the transformed intensity value for the input pixel. *Id.*, col. 4, line 68–col. 5, line 15.

By successively processing each pixel in an image in the manner described above, the invention disclosed in the '381 patent transforms the input image. *Id.*, col. 2, lines 54–68, col. 4, line 68–col. 5, line 15.

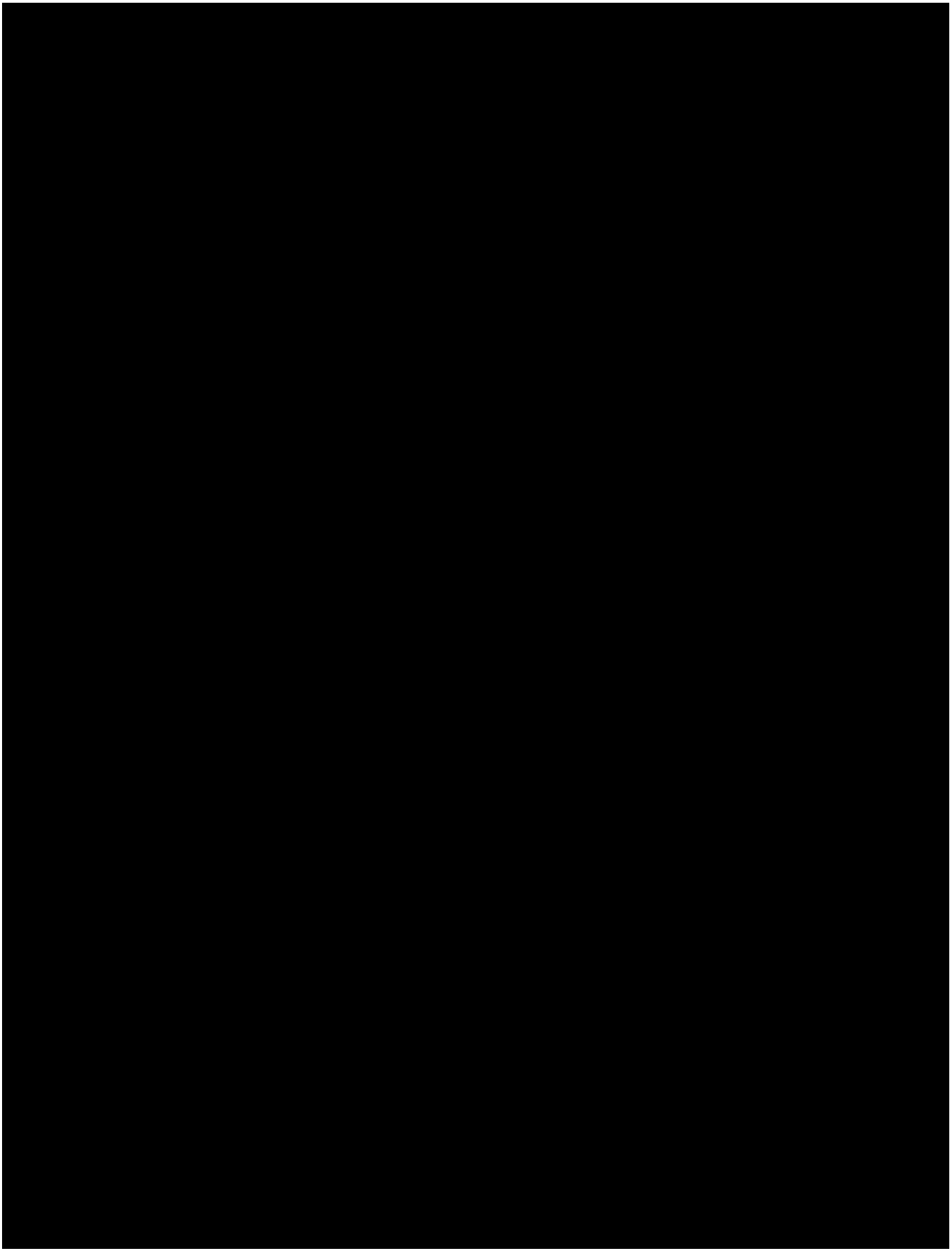
C. HP's Products Embodying Claims 1-3 Of Polaroid's '381 Patent.

HP manufactures and sells various products that embody the inventions of Claims 1-3 of the '381 patent, including cameras, printers, kiosks, and software. LACE Products are those that implement, make use of, or contain source code containing an accused LACE algorithm.[2] The accused LACE algorithms are contained in [redacted] LACE source code. *See* Ex. B, R. Bhaskar Dep. Tr. at p. 184, line 25–p. 185, line 4. [redacted] J.A. Ex. B, Agouris Op. Rpt. at p. 13. Not surprisingly, because the precise operation of the LACE source code can be determined, the operation of the relevant portions of the LACE source code is not in dispute.

[redacted]

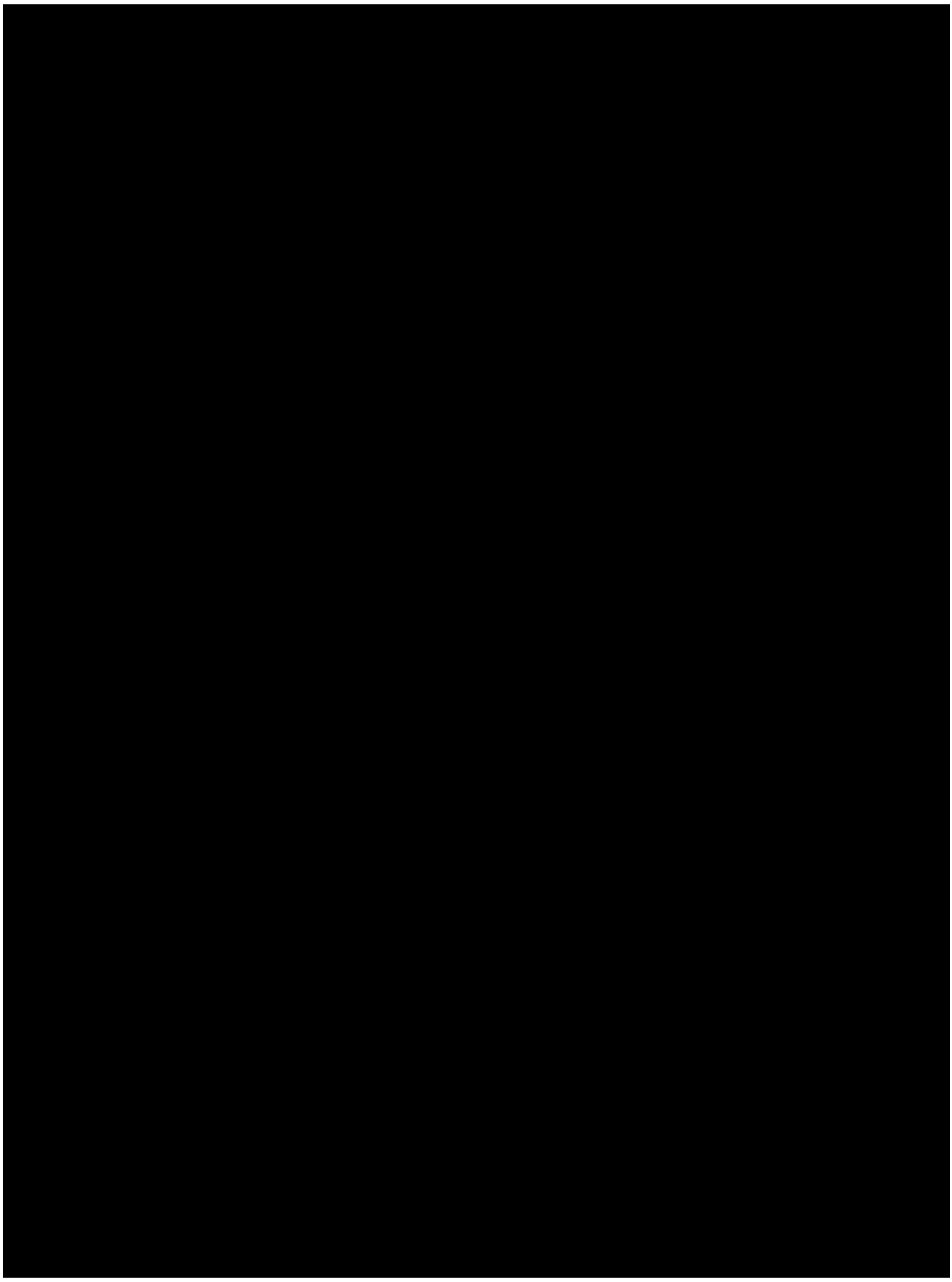
[2] The LACE Products HP has identified as implementing each version of LACE source code can be found in Ex. 9 to Agouris Op. Rpt. (J.A. Ex. B).

[redacted]



[redacted]

[redacted]





ARGUMENT

I. THE APPLICABLE LAW SUPPORTS SUMMARY JUDGMENT OF INFRINGEMENT.

Summary judgment of infringement should be granted if the pleadings, depositions, answers to interrogatories, and admissions on file, together with affidavits, if any, show that there is no genuine issue as to any material fact and that Polaroid is entitled to a judgment as a matter of law. Fed. R. Civ. P. 56(c); *see also*, *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242,



247-48 (1986) (the mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of material fact); *Techsearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1371 (Fed. Cir. 2002) (granting summary judgment in a patent infringement case); *Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1054-55 (Fed. Cir. 2001) (same). There is no issue for trial unless there is sufficient evidence favoring the non-moving party for a jury to return a verdict for that party. *Anderson*, 477 U.S. at 249-50. If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted. *Id*. Thus, HP must do more than merely raise some doubt as to the existence of a fact; HP must provide evidence which would be sufficient to require submission to the jury of the dispute over the fact. *Avia Group Intern., Inc. v. L.A. Gear California, Inc.*, 853 F.2d 1557, 1560 (Fed. Cir. 1988).

It is Polaroid's burden to prove infringement by a preponderance of the evidence. Determining patent infringement is a two-step process. First, this Court interprets the meaning and scope of the asserted claims of the '381 patent. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995). Second, this Court compares the construed claims to the accused HP products to determine whether all the limitations of the asserted patent claims are present in the accused devices. *Id*. Infringement occurs when each claim element is present in an accused HP product, either literally or by equivalence. *See Dawn Equip. Co. v. Ky. Farms, Inc.*, 140 F.3d 1009, 1015 (Fed. Cir. 1998); *Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971 (Fed. Cir. 1999). And, HP cannot avoid infringement by adding an element to its accused products when those products contain each element required of any '381 patent claim. *JVW Enterprises, Inc. v. Interact Accessories, Inc.*, 424 F.3d 1325, 1333–34 (Fed. Cir. 2005); *SunTiger, Inc. v. Scientific Research Funding Group,* 189 F.3d 1327, 1336 (Fed.Cir.1999) ("It is

[redacted]

fundamental that one cannot avoid infringement merely by adding elements if each element recited in the claims is found in the accused device.").

Claims 1 and 3 contain means-plus-function elements governed by 35 U.S.C. § 112, ¶ 6. Literal infringement of a means-plus-function claim element "requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification." *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1320 (Fed. Cir. 2003). An equivalent structure is one that performs the identical function in substantially the same way, with substantially the same result. *Applied Medical Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 (Fed. Cir. 2006).

Claim 2 is an apparatus claim that does not contain a means-plus-function element. Literal infringement of the elements in Claim 2 occurs when each claim element is present in a LACE Product, either literally or by equivalence. *See*, *e.g.*, *Dawn Equip.*, 140 F.3d at 1015.

Because Polaroid establishes below, for each version of LACE source code implemented in LACE Products, that LACE Products contain every limitation from Claims 1-3 of the '381 patent under Polaroid's claim construction, summary judgment of literal infringement of Claims 1-3 under 35 U.S.C. § 271 (a) should be granted.

II. HP'S LACE PRODUCTS LITERALLY INFRINGE CLAIM 1 OF POLAROID'S '381 PATENT.

HP's LACE Products literally infringe Claim 1 of the '381 patent. Each element of Claim 1 is literally present in each LACE Product because the relevant structure in each product performs the recited functions and uses identical or equivalent structure to that disclosed in the specification of the '381 patent. *See Applied Medical*, 448 F.3d at 1333.

[redacted]

A. The Elements Of The Claim 1 Preamble Are Literally Present In HP's LACE Products.

Although the preamble is not a limitation, if it were, HP's LACE Products contain each limitation of the preamble. The preamble reads:

> A system for [*successively transforming*] [*electronic data received in a successive series of signals providing pixel information, such as color, luminance, or chrominance values*], [*each signal being associated with a value that lies within a range of possible values bounded by definite limits*] and corresponding to one of a plurality of succeeding pixels which collectively define an image, said system comprising:

See J.A. Ex. D, Joint Claim Construction Statement - Corrected.

[redacted]

[redacted]

[redacted]

Because HP's LACE Products contain the elements in the preamble to Claim 1, they literally infringe this claim element.

B. The Elements Of Claim 1, Element 1 Are Literally Present In HP's LACE Products.

Element 1 of Claim 1 is literally present in HP's LACE Products. Element 1 reads:

> means for [*calculating an intermediate value for*] [*signals providing pixel information, such as color, luminance, or chrominance values*] corresponding to selected pluralities of pixels and providing an [*signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value*] for each said plurality of pixels so averaged

See J.A. Ex. D, Joint Claim Construction Statement - Corrected. Element 1 is a means-plus-function element. *Id*. The function of this element is "calculating an intermediate value for signals providing pixel information, such as color, luminance, or chrominance values corresponding to selected pluralities of pixels and providing a signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value for each said plurality of pixels so averaged." *Id*. The structure associated with this element is a low-pass filter or block averager or equivalents thereof. J.A. Ex. A, '381 Pat., col. 3, line 61–col. 4, line 25; J.A. Ex. D, Joint Claim Construction Statement - Corrected.

Function:

[redacted]

[redacted]

[redacted]

Structure:

[redacted]

C. The Elements Of Claim 1, Element 2 Are Literally Present In HP's LACE Products.

Element 2 of Claim 1 also is literally present in HP's LACE Products. Element 2 reads:

means for selecting one of a plurality of different [*functions that transform an input signal*] for the [*signal providing pixel information, such as color, luminance, or chrominance value*] for each of the succeeding pixels in a manner whereby each [*function that transforms an input signal*] is selected as a function of the [*signal providing pixel information, such as color, luminance, or chrominance value*] for one pixel and the [*signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value*] for the select plurality of pixels containing said one pixel and for subsequently transforming the [*signal providing pixel information, such as color,*

[redacted]

> *luminance, or chrominance value*] corresponding to each pixel by the [*function that transforms an input signal*] selected for that pixel wherein said selecting and transforming means further operates to select said [*function that transforms an input signal*] as a function of the [*ratio of that calculated intermediate value over a value that lies within the range of possible values*] such that the ratio increases in correspondence with the increase in the value of the [*signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value*].

Element 2 is a means-plus-function element. J.A. Ex. D, Joint Claim Construction Statement - Corrected. The function of this means-plus-function element is:

> selecting one of a plurality of different functions that transform an input signal for the signal providing pixel information, such as color, luminance, or chrominance value for each of the succeeding pixels in a manner whereby each function that transforms an input signal is selected as a function of the signal providing pixel information, such as color, luminance, or chrominance value for one pixel and the signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value for the select plurality of pixels containing said one pixel and for subsequently transforming the signal providing pixel information, such as color, luminance, or chrominance value corresponding to each pixel by the function that transforms an input signal selected for that pixel wherein said selecting and transforming means further operates to select said function that transforms an input signal as a function of the ratio of that calculated intermediate value over a value that lies within the range of possible values such that the ratio increases in correspondence with the increase in the value of the signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value.

Id.

The corresponding structure for this element is the following algorithm in the patent specification:

$$Y_{OUT} = Y_{MAX}*(Y_{IN}/Y_{MAX})^{\gamma}, \text{ where } \gamma=(1+C)^{(Av/M-1)} \text{ and equivalents thereof.}$$

Id. In this equation: (1) Y_{OUT} is the output pixel intensity value; (2) Y_{MAX} is the highest value of the dynamic range for the electronic information signals — 255 for an 8-bit image; (3) Y_{IN} is an input pixel intensity value associated with a pixel to be transformed; (4) C is a constant (with a preferred embodiment of 1); (5) Av is the average intensity value calculated using the neighborhood of pixels surrounding and including the pixel associated with Y_{IN}; and (6) M is

[redacted]

any value within the dynamic range of the image (0-255 for an 8-bit image). J.A. Ex. A, '381 Pat., col. 4, line 26–col. 5, line 26, col. 6, lines 30–42; J.A. Ex. B, Agouris Op. Rpt. at p. 25.

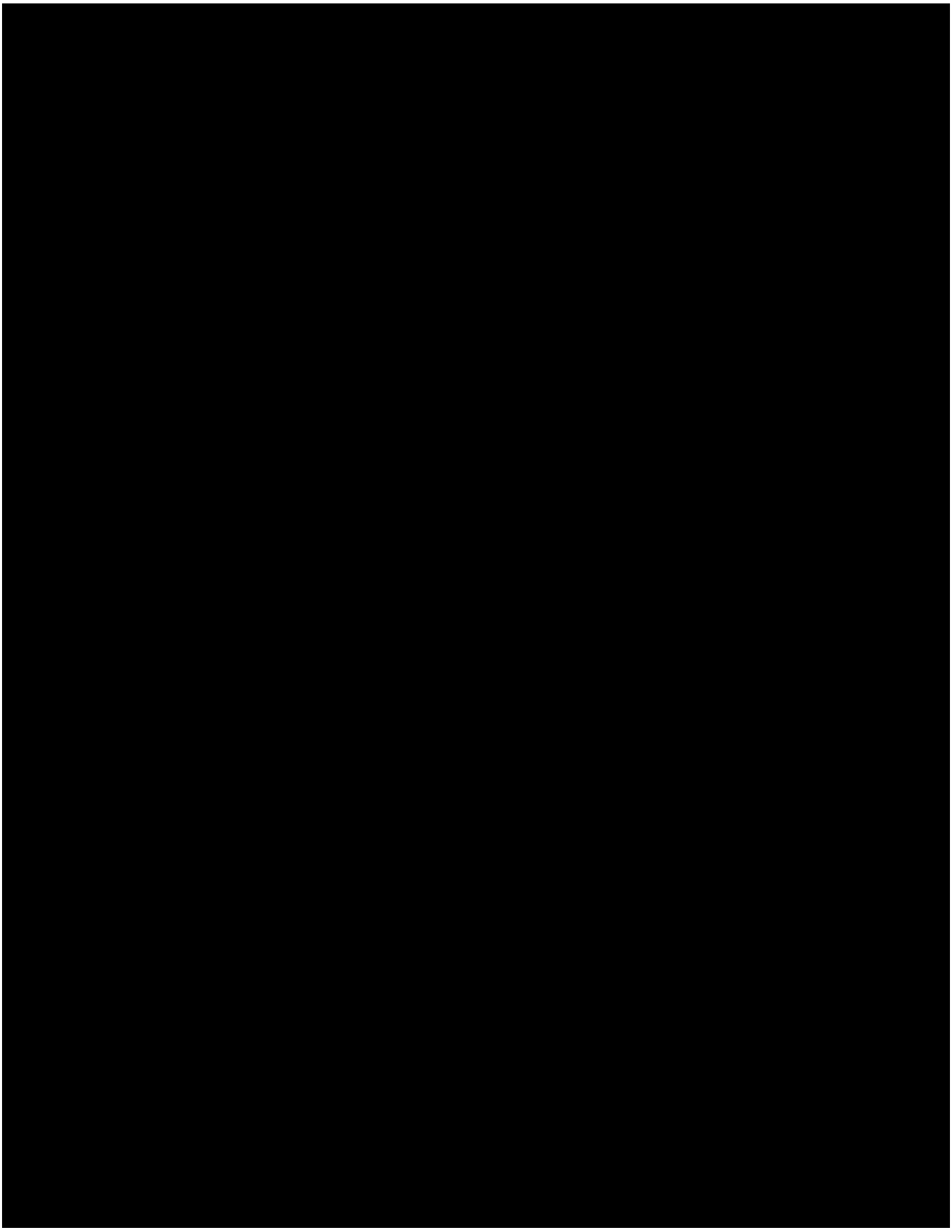
HP deploys insubstantial variations of this claim element among the LACE Products [redacted] Regardless of the insubstantial differences, HP's LACE Products satisfy this limitation.

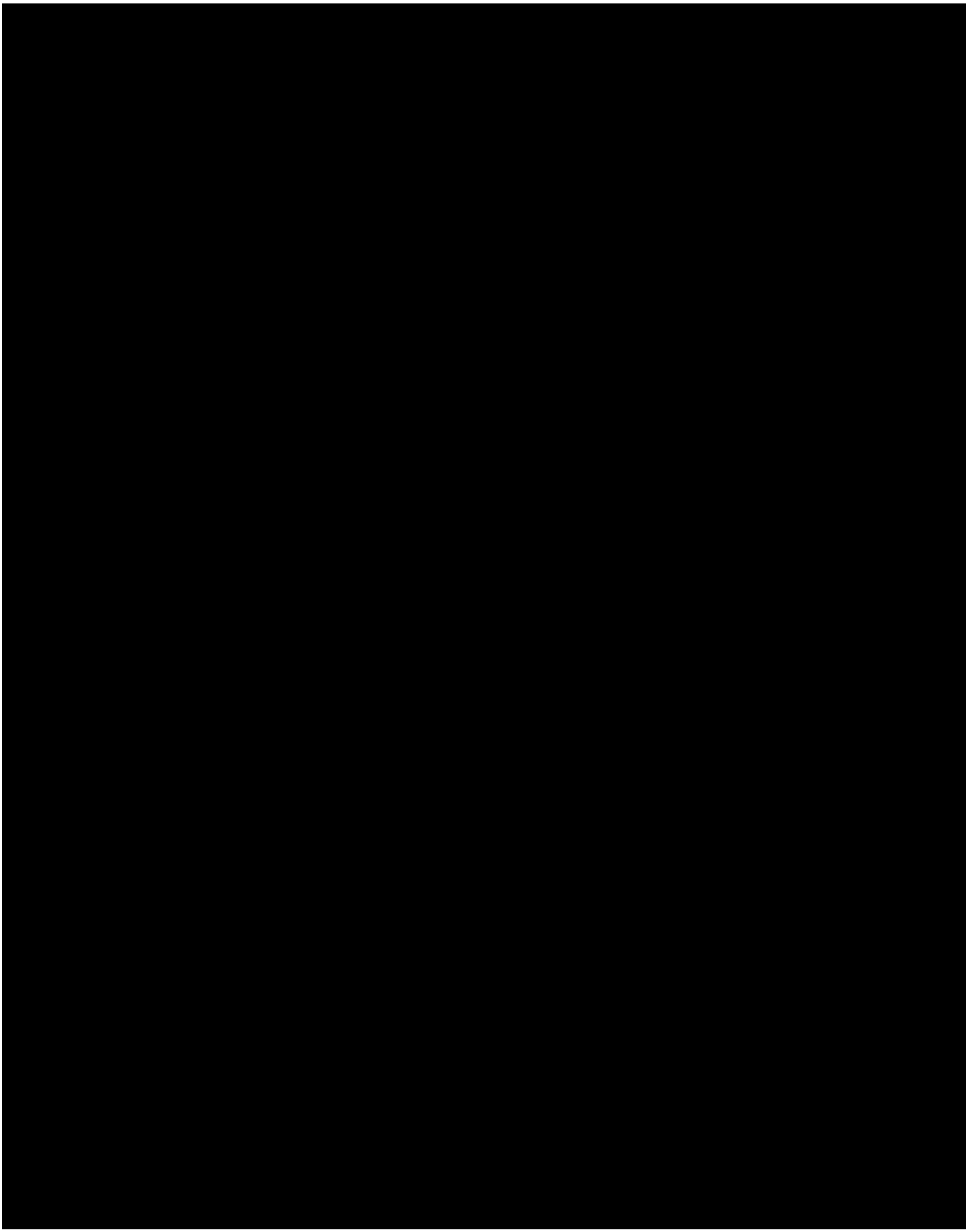
1. HP's LACE Products implementing [redacted] source code literally infringe Claim 1, Element 2.

Function:

[redacted]

[redacted]



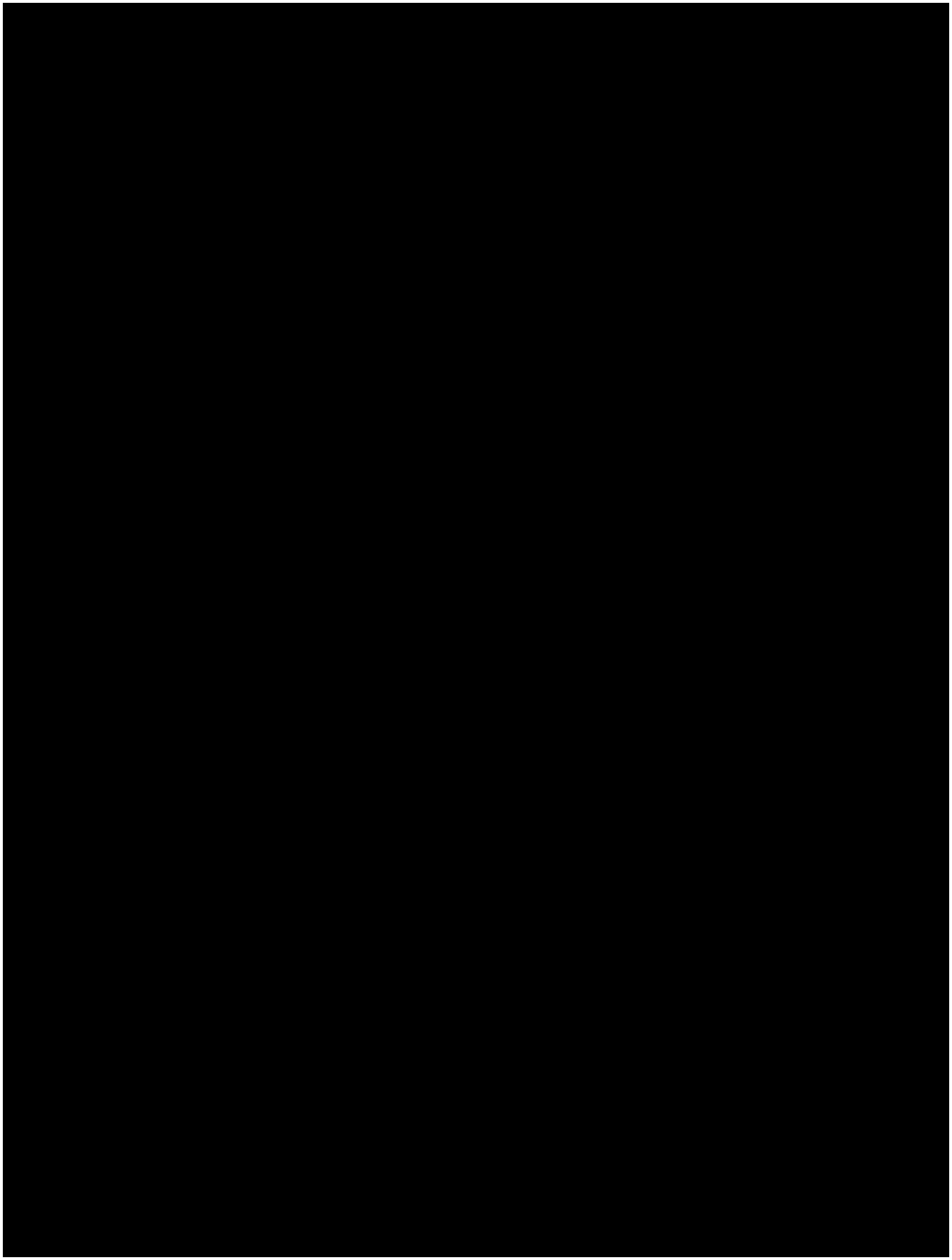


[redacted]

Structure:

[redacted]

[redacted]





In sum, because the LACE Products implementing [redacted] perform the identical function with a structure that is insubstantially different from and therefore equivalent of that required by Claim 1, Element 2, these LACE Products literally meet this claim limitation.

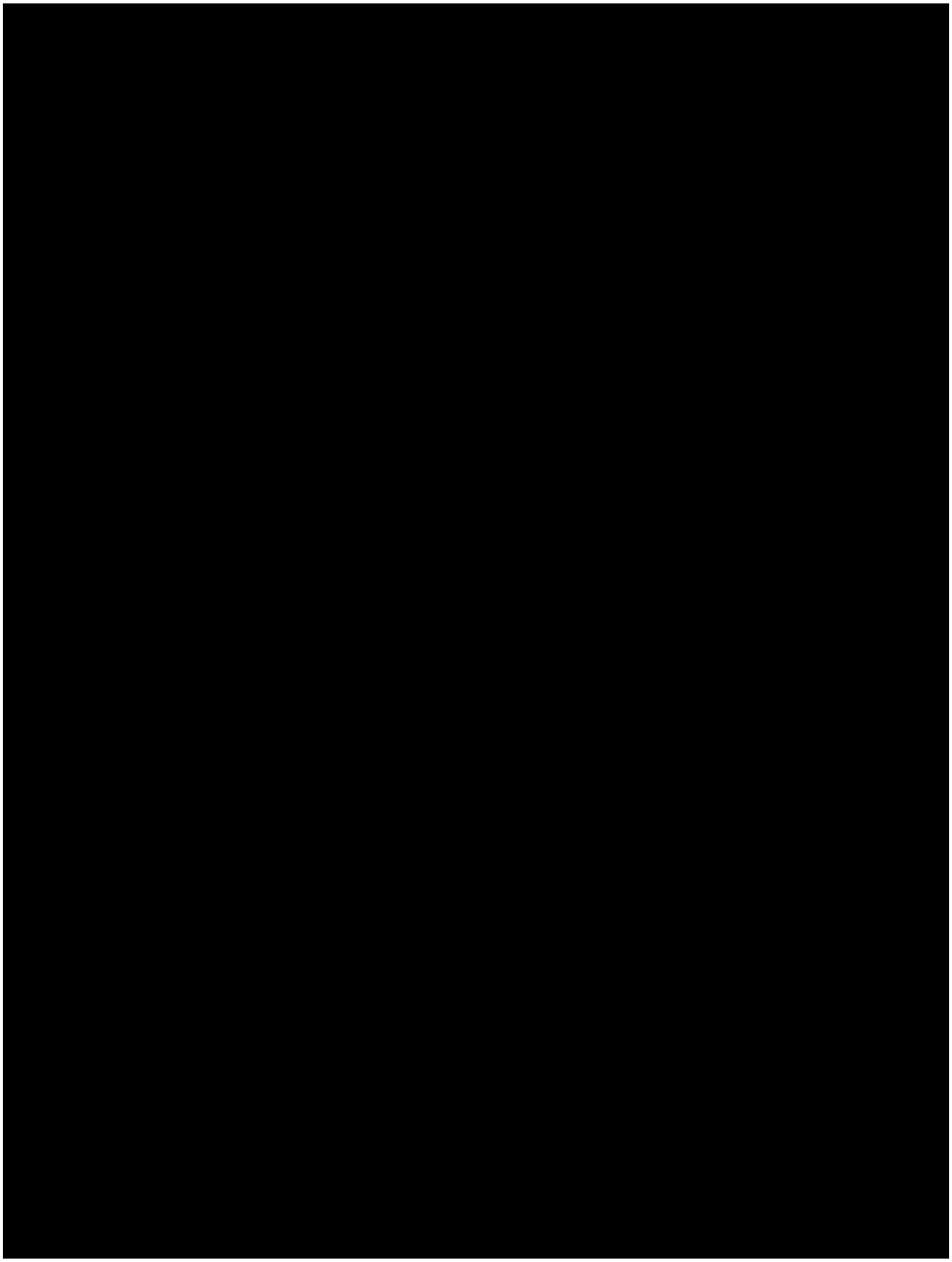
[redacted]

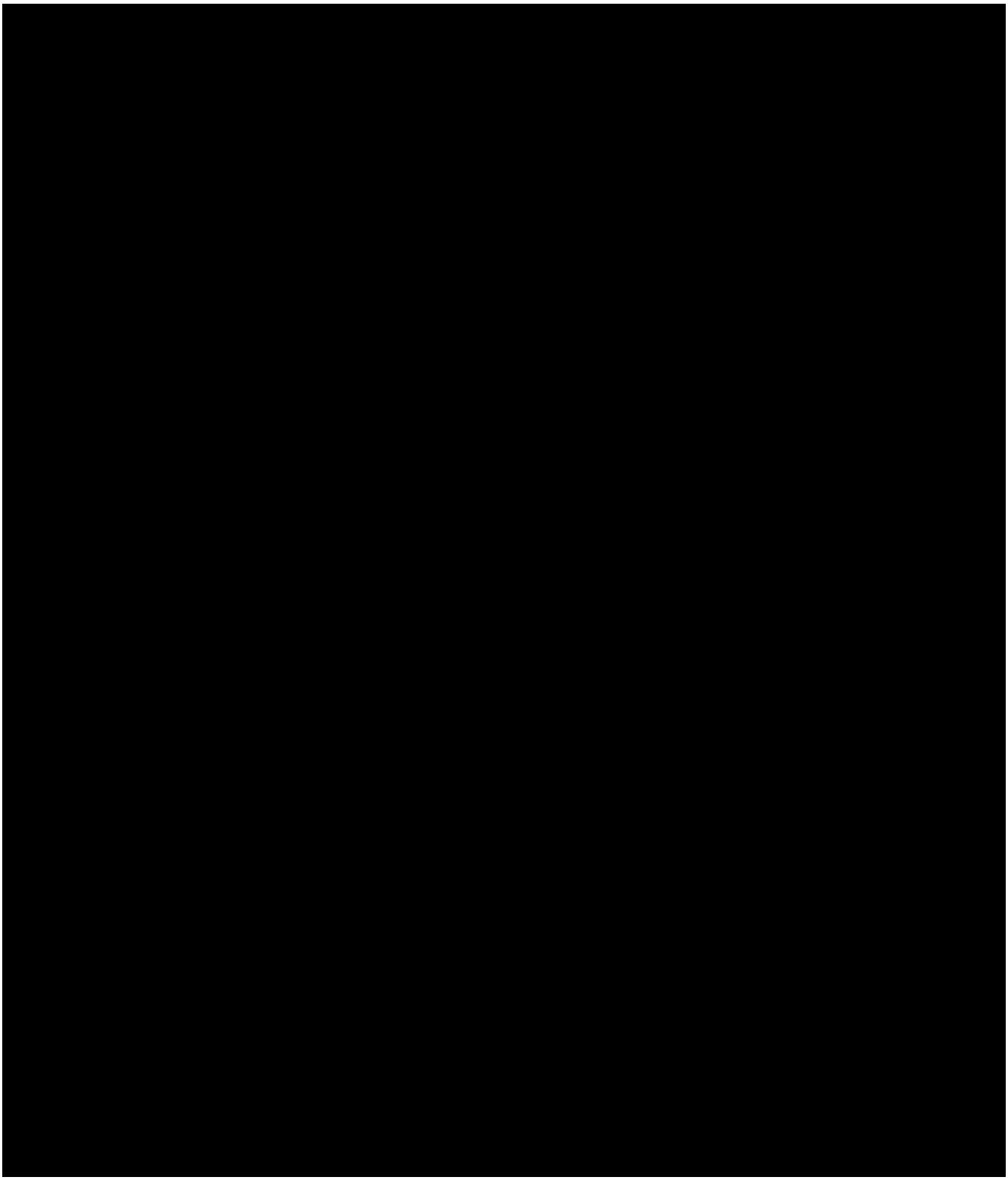
2. HP's LACE Products implementing [redacted] source code literally infringe Claim 1, Element 2.

Function:

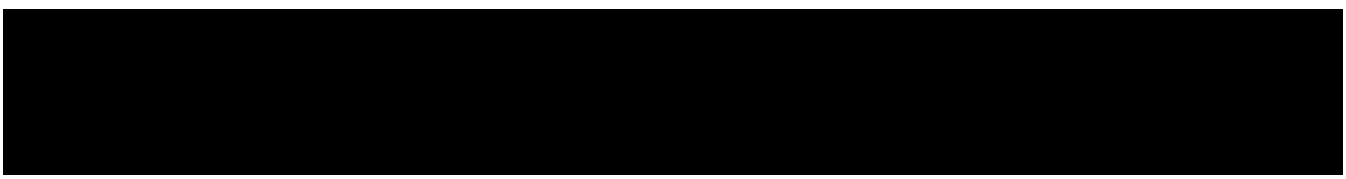
[redacted]

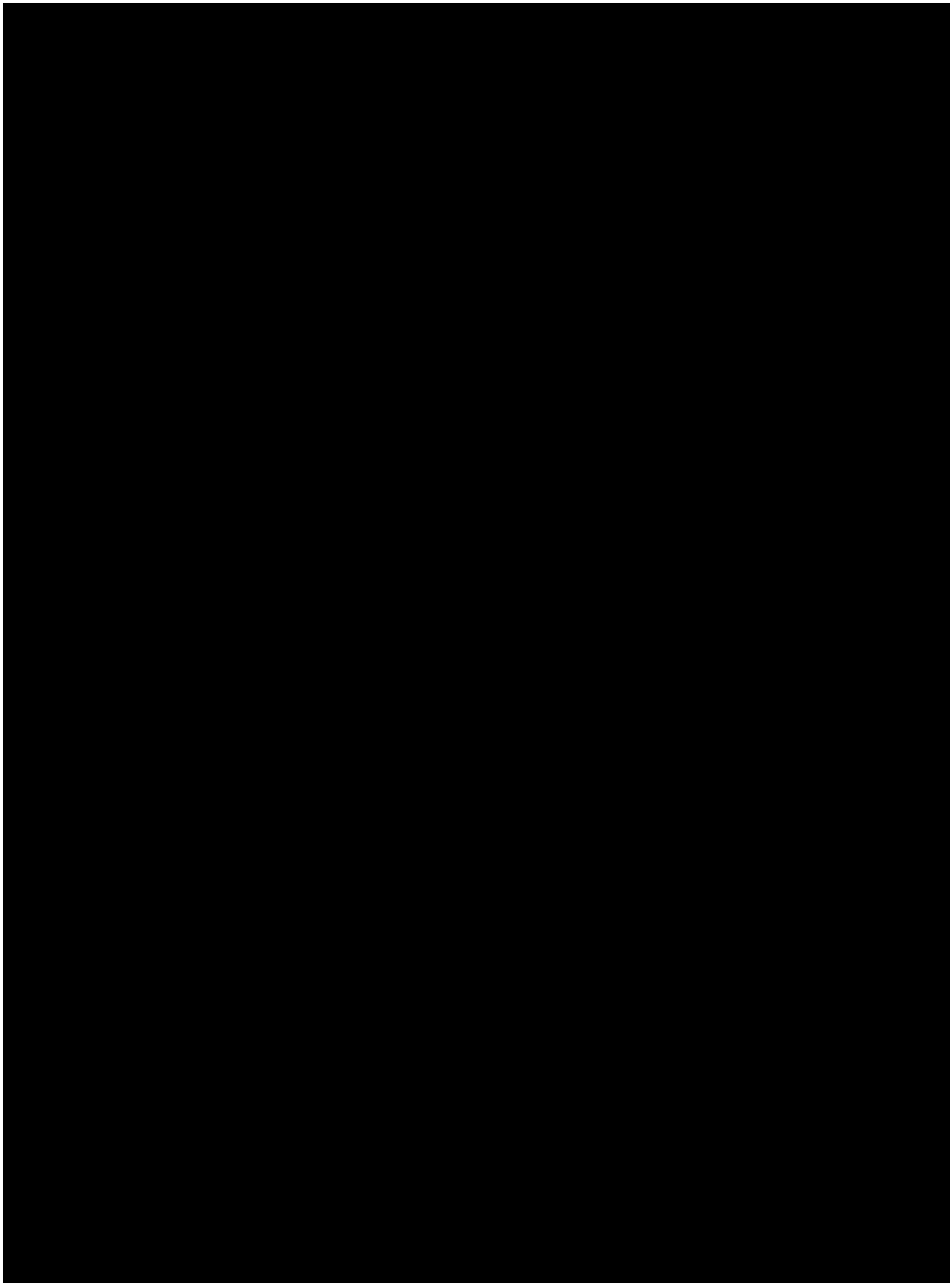
[redacted]





Structure:





[redacted]

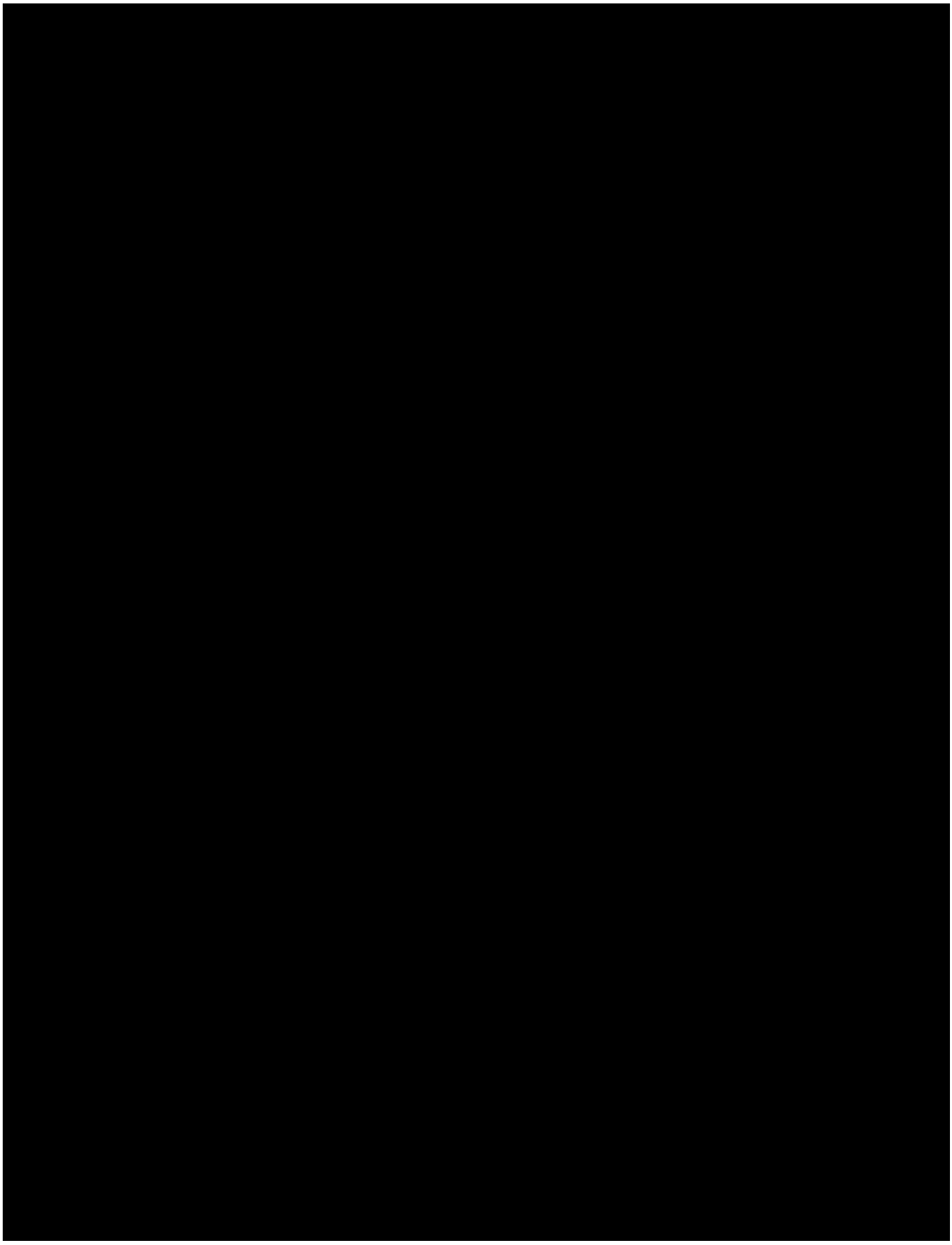
In sum, because the [redacted] LACE Products perform the identical function with structure that is insubstantially different from and therefore equivalent of that required by Claim 1, Element 2, the [redacted] LACE Products literally meet this claim limitation.

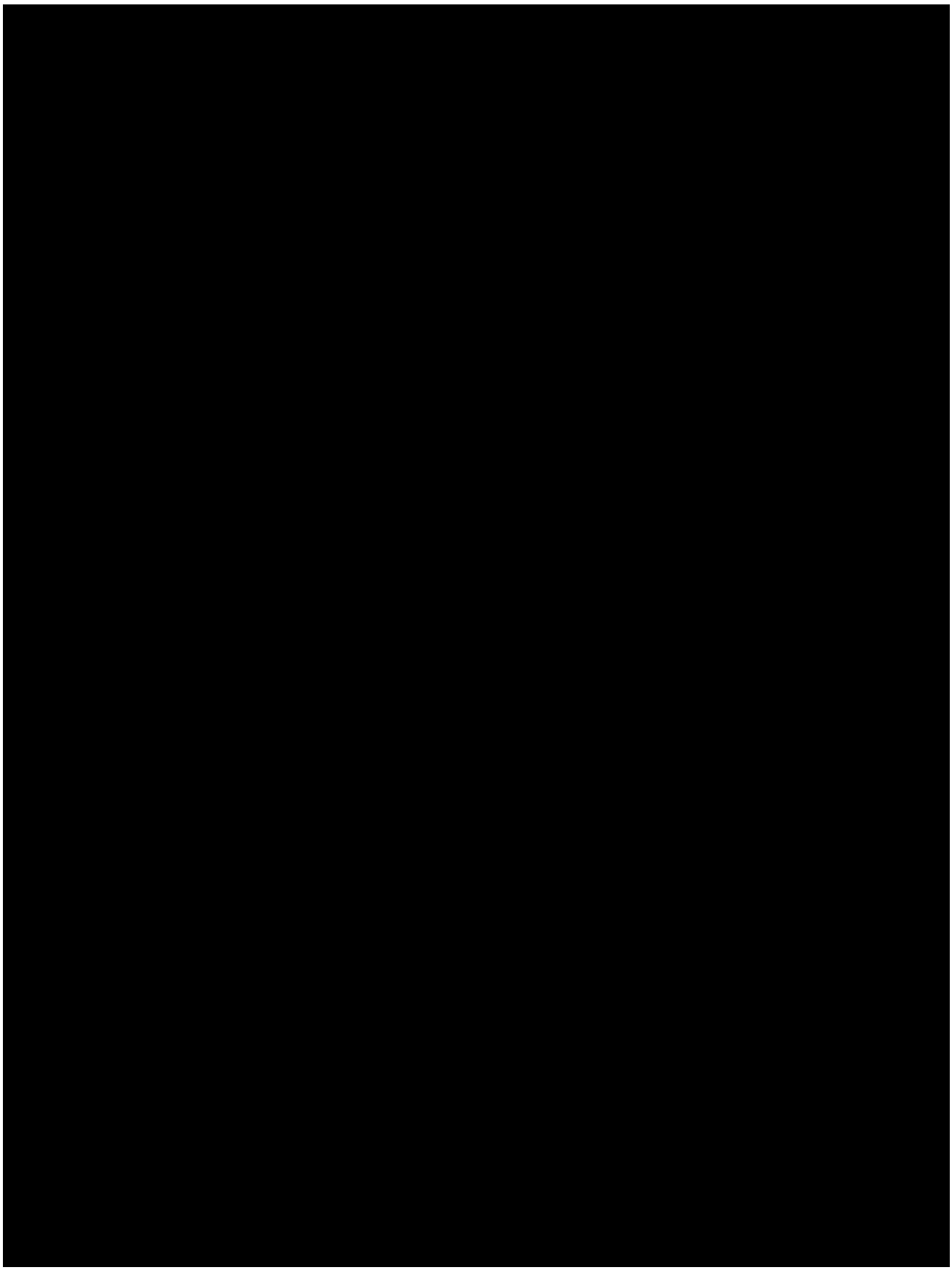
3. HP's LACE Products implementing [redacted] source code literally infringe Claim 1, Element 2.

Function:

[redacted]

[redacted]

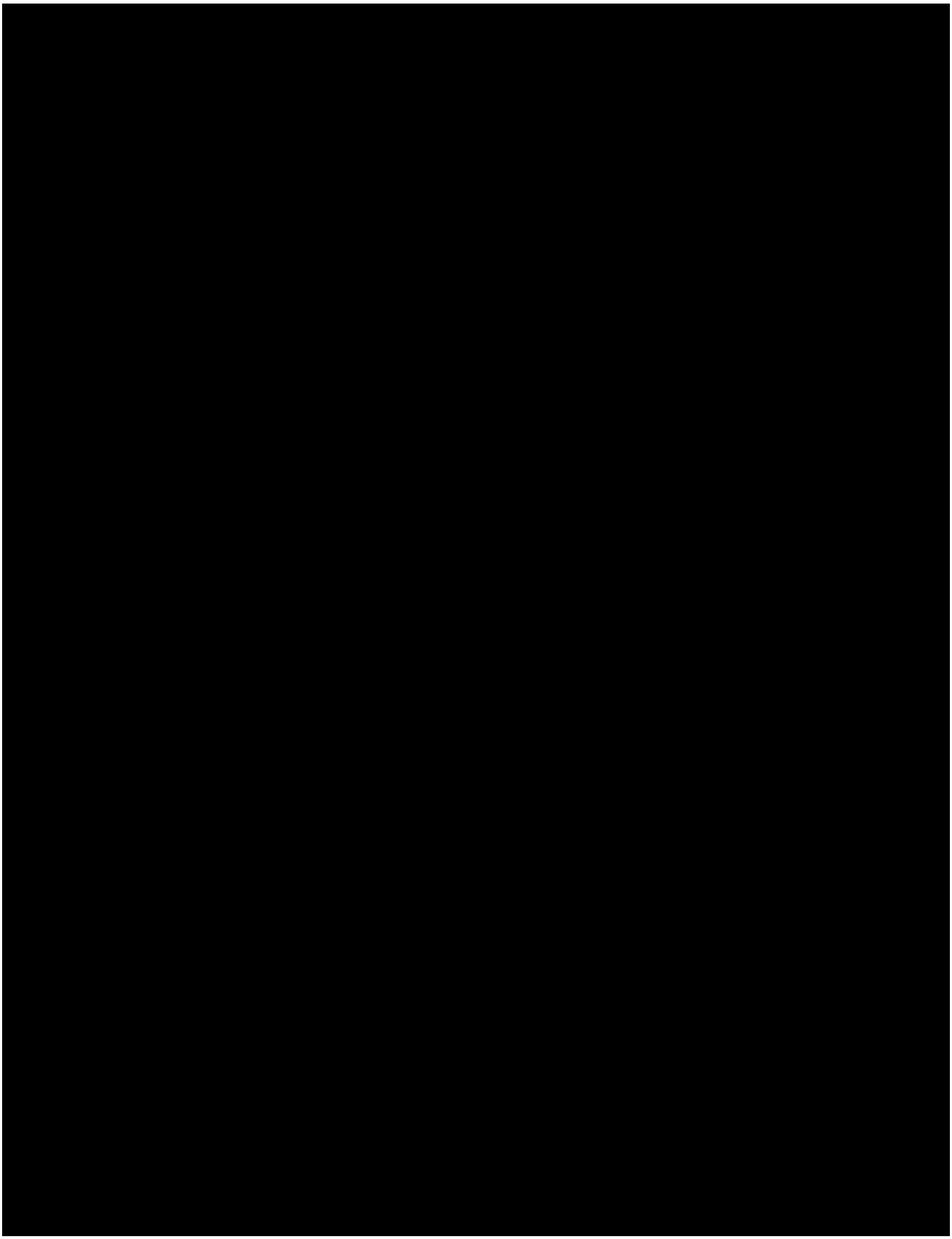


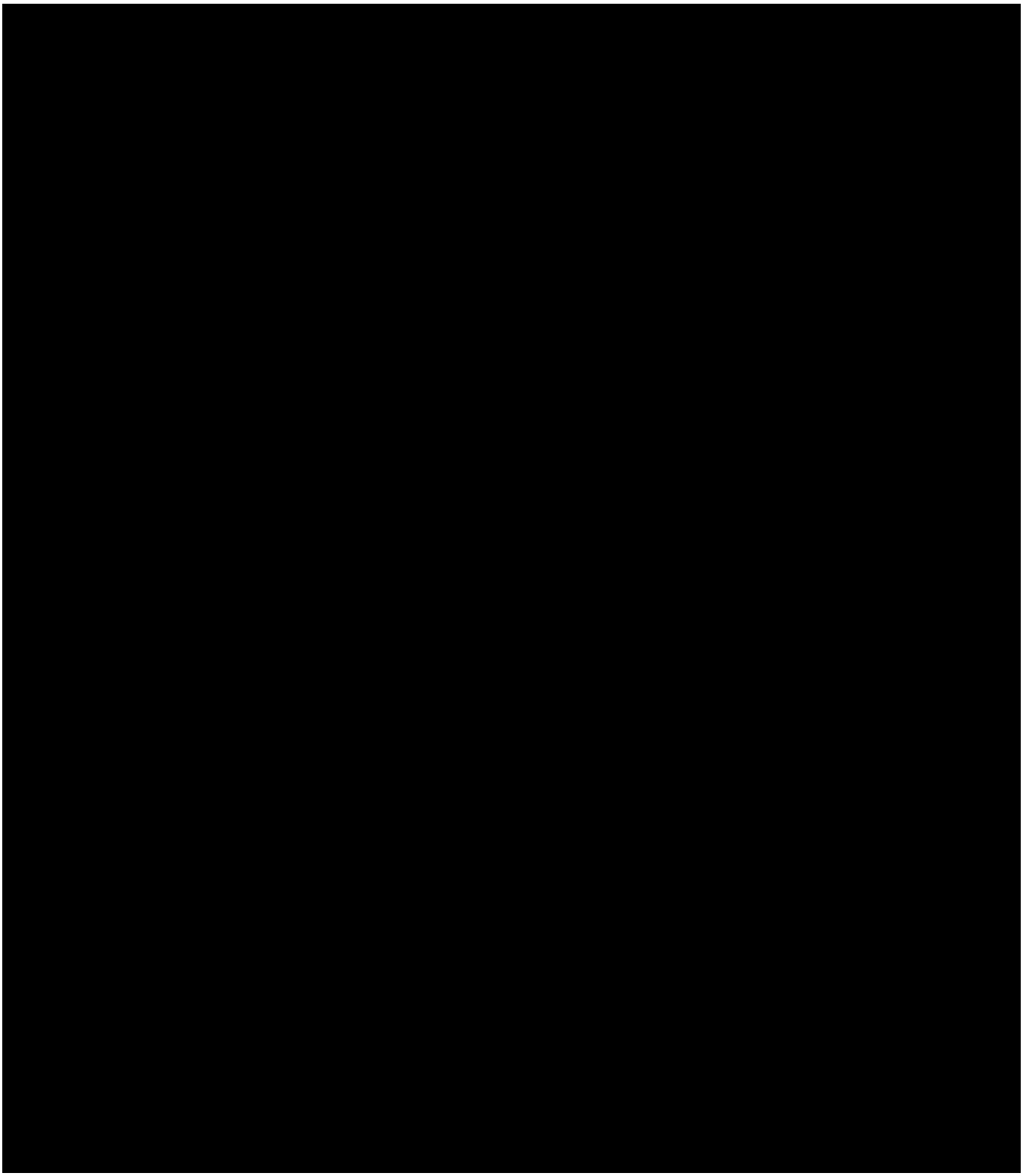




Structure:







In sum, because LACE [redacted] Products perform the identical function with a structure that is insubstantially different from and therefore equivalent of that required by Claim 1, Element 2, LACE [redacted] Products literally meet this claim limitation.

[redacted]

III. HP'S LACE PRODUCTS LITERALLY INFRINGE CLAIM 2 OF POLAROID'S '381 PATENT.

HP's LACE Products literally infringe Claim 2 of the '381 patent because each limitation is present in HP's LACE Products. *See*, *e.g.*, *Dawn Equip.*, 140 F.3d at 1015. Claim 2 reads:

> 2. The system of claim 1 wherein said selecting and transforming means is responsive to an [*signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value*] indicative of low scene light intensity levels for transforming the [*signals providing pixel information, such as color, luminance, or chrominance value*] to provide a higher contrast to those [*signals providing pixel information, such as color, luminance, or chrominance value*] corresponding to pixels having the lowest scene light intensity levels and is further responsive to an [*signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value*] indicative of high scene light intensity levels for transforming the [*signals providing pixel information, such as color, luminance, or chrominance value*] to provide a higher contrast to those [*signals providing pixel information, such as color, luminance, or chrominance value*] corresponding to pixels having the highest scene light intensity levels.

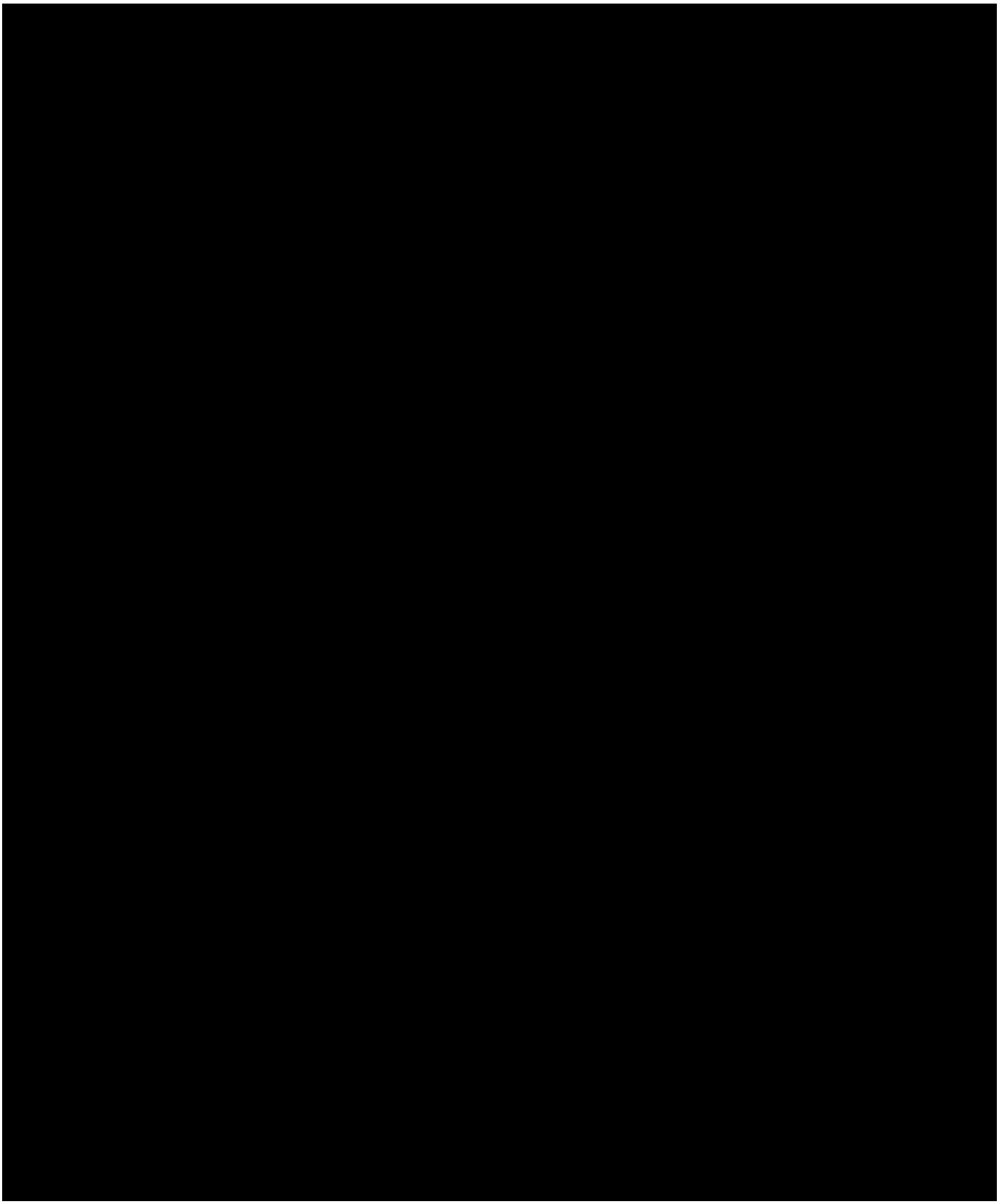
J.A. Ex. D, Joint Claim Construction Statement - Corrected. Claim 2 is dependent on Claim 1. As previously established, HP's LACE Products embody every element of Claim 1. As to the specific Claim 2 limitation, HP products containing each version of LACE source code literally meet this limitation.

Stated in practical terms, Claim 2 means that the system described above for Claim 1 needs to provide a higher contrast for pixels having the lowest and highest intensity levels. *See* J.A. Ex. B, Agouris Op. Rpt. at p. 47–48. As explained in the '381 patent specification, when the various transfer functions encompassed by the invention are plotted, the point in each graphed transfer curve where the curve is the steepest is the point where the change in contrast is the greatest. J.A. Ex. A, '381 Pat., col. 5, line 22–col. 6, line 6. Conversely, the flatter the curve, the lower the contrast change. *Id*.

Polaroid's technical expert Dr. Peggy Agouris plotted curves for [redacted] the various versions of LACE and graphically illustrated how each version meets

[redacted]

the limitation of Claim 2. J.A. Ex. B, Agouris Op. Rpt. at p. 47; Ex. 29 to Agouris Opening Expert Report (J.A. Ex. B). A representative graph is shown below:



Id. at 47–48.

The plotted graphs for each version of LACE exhibit the same characteristics as the representative graph. *Id*. at 47. Because the characteristics are identical to what is required by Claim 2, LACE Products literally meet the limitation of Claim 2.

IV. HP'S LACE PRODUCTS LITERALLY INFRINGE CLAIM 3 OF POLAROID'S '381 PATENT.

HP's LACE Products literally infringe Claim 3 because the relevant structure in each LACE Product performs the identical function and uses identical or equivalent structure to that disclosed in the specification of the '381 patent. *See Applied Medical*, 448 F.3d at 1333. Claim 3 reads:

> 3. The system of claim 2 wherein said selecting and transforming means further operates to select said [*function that transforms an input signal*] as a function of a [*chosen number*] whose value corresponds to the amount of contrast provided in those areas of higher contrast provided by said select [*function that transforms an input signal*].

J.A. Ex. D, Joint Claim Construction Statement - Corrected. Claim 3 is dependent on Claim 2. Claim 3 contains a means-plus-function limitation. The function of Claim 3 is:

> selecting one of a plurality of different functions that transform an input signal for the signal providing pixel information, such as color, luminance, or chrominance value for each of the succeeding pixels in a manner whereby each function that transforms an input signal is selected as a function of the signal providing pixel information, such as color, luminance, or chrominance value for one pixel and the signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value for the select plurality of pixels containing said one pixel and for subsequently transforming the signal providing pixel information, such as color, luminance, or chrominance value corresponding to each pixel by the function that transforms an input signal selected for that pixel wherein said selecting and transforming means further operates to select said function that transforms an input signal as a function of the ratio of that calculated intermediate value over a value that lies within the range of possible values such that the ratio increases in correspondence with the increase in the value of the signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value, wherein said selecting and transforming means further operates to select said transfer function as a function of a determined constant whose value corresponds to the amount of contrast provided in those areas of higher contrast provided by said select transfer function.

[redacted]

Id. The structure associated with this element is the following algorithm:

$$Y_{OUT} = Y_{MAX}*(Y_{IN}/Y_{MAX})^{\gamma}, \text{ where } \gamma=(1+C)^{(Av/M-1)} \text{ and equivalents thereof.}$$

As explained with respect to Claim 1, in this algorithm: (1) Y_{OUT} is the output pixel intensity value; (2) Y_{MAX} is the highest value of the dynamic range for the electronic information signals — 255 for an 8-bit image; (3) Y_{IN} is an input pixel intensity value associated with a pixel to be transformed; (4) C is a constant (with a preferred embodiment of 1); (5) Av is the average intensity value calculated using the neighborhood of pixels surrounding and including the pixel associated with Y_{IN}; and (6) M is any value within the dynamic range of the image (0-255 for an 8-bit image). J.A. Ex. A, '381 Pat., col. 4, line 26–col. 5, line 26, col. 6, lines 30–42; J.A. Ex. B, Agouris Op. Rpt. at p. 38–39.

Function:

[redacted]

[redacted]

[redacted]

Structure:

[redacted]

CONCLUSION

For the foregoing reasons, Polaroid respectfully requests that the Court enter summary judgment that HP's LACE Products infringe Claims 1-3 of the '381 patent.

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May 16, 2008
2334528

[redacted]

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on May 23, 2008, I electronically filed the foregoing with the Clerk of the Court using CM/ECF, which will send notification of such filing(s) to the following:

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FISH & RICHARDSON P.C.

I also certify that copies were caused to be served on May 23, 2008 upon the following in the manner indicated:

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