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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

QIAGEN NORTH AMERICAN HOLDINGS, INC.,
Petitioner,

v.

HANDYLAB, INC.,
Patent Owner.

Case IPR2019-00488
Patent 7,998,708 B2

Before JO-ANNE M. KOKOSKI, CHRISTOPHER G. PAULRAJ, and JULIA HEANEY, *Administrative Patent Judges.*

KOKOSKI, *Administrative Patent Judge.*

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

QIAGEN North American Holdings, Inc. ("Petitioner") filed a Petition to institute an *inter partes* review of claims 1–33 of U.S. Patent No. 7,998,708 B2 ("the '708 patent," Ex. 1002). Paper 1 ("Pet."). HandyLab, Inc. ("Patent Owner") filed a Preliminary Response. Paper 5 ("Prelim. Resp.").

Institution of an *inter partes* review is authorized by statute when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314; *see* 37 C.F.R. § 42.4. Upon consideration of the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has established a reasonable likelihood of prevailing with respect to the unpatentability of at least 1 claim of the '708 patent. Accordingly, we institute an *inter partes* review of claims 1–33 of the '708 patent.

A. Related Proceedings

Petitioner indicates that there are no related matters. Pet. 1. Patent Owner identifies *QIAGEN North American Holdings, Inc. v. HandyLab, Inc.*, Case IPR2019-00490, concerning U.S. Patent No. 8,323,900 (which is a continuation of the '709 patent), as a related matter. Paper 3, 1. We issue our decision instituting trial in IPR2019-00490 concurrently with this decision.

B. The '708 Patent

The '708 patent, titled "Microfluidic System for Amplifying and Detecting Polynucleotides in Parallel," is directed to "a system and related methods for amplifying, and carrying out diagnostic analyses on,

polynucleotides (e.g., a DNA, RNA, mRNA, or rRNA) from biological samples." Ex. 1002, [54], 3:64–67. The claimed system "includes a disposable microfluidic cartridge containing multiple sample lanes in parallel and a reusable instrument platform (a PCR analyzer apparatus) that can actuate on-cartridge operations" and "can detect (e.g., by fluorescence detection) and analyze the products of the PCR amplification in each of the lanes separately, in all simultaneously, or in groups simultaneously." *Id.* at 4:7–13. The system optionally "can display the results on a graphical user interface." *Id.* at 4:13–15.

The '708 patent's Figure 1 is reproduced below.

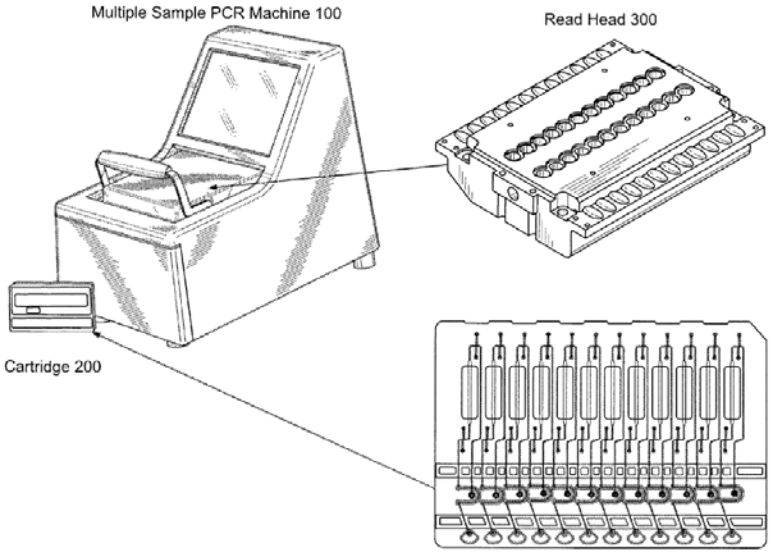

FIG. 1

Figure 1 is "a perspective view of an exemplary apparatus 100" described by the '708 patent. *Id.* at 4:33–34. Apparatus 100 includes read head 300 "that contains detection apparatus for reading signals from cartridge 200." *Id.* at 4:35–37. Apparatus 100 "is able to carry out real-time PCR on a number of samples in cartridge 200 simultaneously." *Id.* at 4:38–40. Cartridge 200 contains multiple sample lanes, and the '708 patent explains that

"[p]referably the number of samples is 12 samples, as illustrated with exemplary cartridge 200," although other numbers of samples can be present. *Id.* at 4:34–35, 4:40–43.

The '708 patent's Figure 3 is reproduced below.

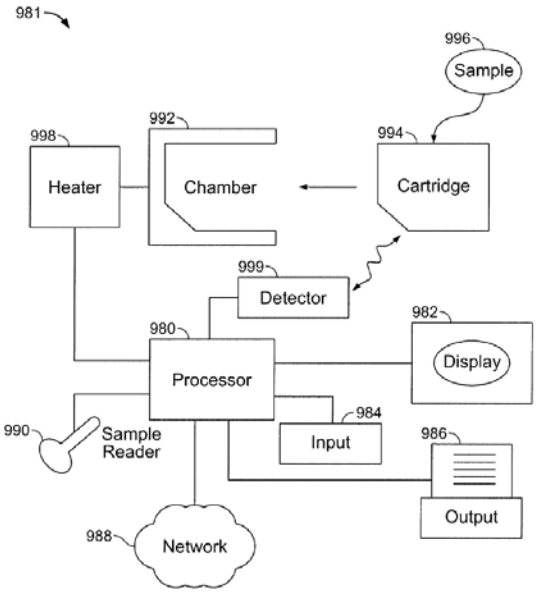

FIG. 3

Figure 3 is a "schematic overview of a system 981 for carrying out the analyses described" in the '708 patent. *Id.* at 4:54–55. Processor 980 "is configured to control functions of various components of the system," such as receiving data about a sample to be analyzed from sample reader 990, "which may be a barcode reader, an optical character reader, or an RFID scanner (radio frequency tag reader)." *Id.* at 4:59–65. Processor 980 can also be configured to accept user instructions from input 984, to communicate with optional display 982, to transmit analysis results to an output device, and to control various aspects of sample diagnostics. *Id.* at 4:67–5:19, 6:1–3.

System 981 "is configured to operate in conjunction with a complementary cartridge 994, such as a microfluidic cartridge." *Id.* at 6:3–5. Cartridge 994 is itself configured "to receive one or more samples 996 containing one or more polynucleotides in a form suitable for amplification and diagnostic analysis," and "has dedicated regions within which amplification, such as by PCR, of the polynucleotides is carried out when the cartridge is situated in the apparatus." *Id.* at 6:5–11. Receiving bay 992 is "configured to selectively receive the cartridge," and "is in communication with a heater unit 998 that itself is controlled by processor 980 in such a way that specific regions of the cartridge, such as individual sample lanes, are independently and selectively heated at specific times during amplification and analysis." *Id.* at 6:12–13, 6:33–37.

Processor 980 "is also configured to receive signals from and control a detector 999 configured to detect a polynucleotide in a sample in one or more individual sample lanes, separately or simultaneously." *Id.* at 7:31–34. Detector 999 can be "an optical detector that includes a light source that selectively emits light in an absorption band of a fluorescent dye, and a light detector that selectively detects light in an emission band of the fluorescent dye, wherein the fluorescent dye corresponds to a fluorescent polynucleotide probe." *Id.* at 7:41–46.

The '708 patent explains that system 981 "is configured so that a cartridge with capacity to receive multiple samples can be acted upon by the system to analyze multiple samples—or subsets thereof—simultaneously, or to analyze the samples consecutively." *Id.* at 7:64–67. According to the '708 patent, this system is self-contained and therefore "is advantageous at least because it does not require locations within the system suitably

configured for storage of reagents," and does not "require inlet or outlet ports that are configured to receive reagents from, e.g., externally stored containers such as bottles, canisters, or reservoirs." *Id.* at 8:4–11.

C. Challenged Claims

Petitioner challenges claims 1–33 ("the challenged claims") of the '708 patent. Claims 1 and 33 are independent, and are reproduced below.

> 1. An apparatus, comprising:
>
> a multi-lane microfluidic cartridge, each lane comprising a PCR reaction zone;
>
> a receiving bay configured to receive the microfluidic cartridge;
>
> each PCR reaction zone comprising a separately controllable heat source thermally coupled thereto, wherein the heat source maintains a substantially uniform temperature throughout the PCR reaction zone and thermal cycles the PCR reaction zone to carry out PCR on a polynucleotide-containing sample in the PCR reaction zone;
>
> a detector configured to detect the presence of an amplification product in the respective PCR reaction zone; and
>
> a processor coupled to the detector and the heat source, configured to control heating of one or more PCR reaction zones by the heat sources.

Ex. 1002, 46:5–22.

> 33. A method of carrying out PCR on a plurality of samples, the method comprising:
>
> introducing the plurality of samples into a multi-lane microfluidic cartridge, wherein each lane comprises a PCR reaction zone configure to permit thermal cycling of a sample independently of the other samples;

moving the plurality of samples into the respective plurality of PCR reaction zones; and

amplifying polynucleotides contained with the plurality of samples in the PCR reaction zones while thermal cycling the PCR reaction zones, at least one PCR reaction zone separately thermally controllable from another PCR reaction zone.

Id. at 48:28–40.

D. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–33 of the '708 patent on the following grounds:

Reference(s)	Basis	Challenged Claim(s)
Zou I[1] and McNeely[2] or Pease[3]	§ 103	1–6, 9, 10, 18–20, 23–25, 28, 30–33
Zou I, McNeely or Pease, and Hsieh[4]	§ 103	7, 8
Zou I, McNeely or Pease, and Zou II[5]	§ 103	11–17
Zou I and McNeely	§ 103	21, 22
Zou I, McNeely or Pease, and Duong[6]	§ 103	26, 27
Zou I, McNeely or Pease, and Chow[7]	§ 103	29

[1] U.S. Patent No. 6,509,186 B1, issued Jan. 21, 2003 (Ex. 1008).
[2] U.S. Patent App. Pub. No. US 2004/0037739 A1, published Feb. 26, 2004 (Ex. 1009).
[3] U.S. Patent App. Pub. No. US 2004/0151629 A1, published Aug. 5, 2004 (Ex. 1010).
[4] U.S. Patent No. 7,122,799 B2, issued Oct. 17, 2006 (Ex. 1012).
[5] U.S. Patent No. 6,762,049 B2, issued July 13, 2004 (Ex. 1011).
[6] WO 01/54813 A2, published Aug. 2, 2001 (Ex. 1013).
[7] U.S. Patent No. 5,955,028, issued Sept. 21, 1999 (Ex. 1014).

Petitioner relies on the Declaration of Bruce K. Gale, Ph.D. (Ex. 1001) in support of its contentions. Patent Owner relies on the Declaration of Michael G. Mauk, Ph.D. (Ex. 2005) in support of its Preliminary Response.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art ("POSA") would have had "a degree in Mechanical Engineering, Bioengineering, or a similar field, and three years of experience with microfluidic devices or systems relating to biochemical reactions/analysis, such as PCR," or "an advanced degree in a similar field with at least one year of related experience." Pet. 5. Patent Owner does not dispute Petitioner's proposed definition at this stage of the proceeding. Prelim. Resp. 4. Accordingly, for purposes of this Decision, we adopt Petitioner's assessment of the level of ordinary skill in the art, which is consistent with the level of ordinary skill in the art at the time of the invention as reflected in the prior art in this proceeding. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Claim Interpretation

For petitions such as this one, filed after November 13, 2018, we apply the same claim construction standard "used in the federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), which is articulated in" *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 83 Fed. Reg. 51,340, 51,343 (Oct. 11, 2018). Under the *Phillips* standard, the "words of a claim 'are generally given their ordinary and customary meaning,'" which is "the meaning that the term would have to a person of

ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1312–13. Only those terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'") (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner proposes a construction for the term "contact heat source" in dependent claims 10–17. Pet. 4–5. Patent Owner responds that construction of "contact heat source" is not necessary at this stage of the proceeding. Prelim. Resp. 4. Based on the record before us, for purposes of this Decision, we determine that no claim term requires explicit construction.

C. Obviousness over Zou I and Pease

Petitioner contends that the combined teachings of Zou I and Pease teach or suggest each limitation of claims 1–6, 9, 10, 18–20, 23–25, 28, and 30–33. Pet. 28–63. Petitioner contends that "Zou I discloses much of the purported invention," and that "[t]he remaining elements, such as a detector, a processor coupled to the detector, and a receiving bay configured to receive a microfluidic cartridge, were standard features of integrated machines used for performing biochemical reactions such as PCR," including those described by Pease. *Id.* at 28. Petitioner also contends that "a POSA would have been motivated to combine the multiplexing PCR unit of Zou I with a conventional integrated machine such as" that described in Pease, with a reasonable expectation of success. *Id.* at 29–33.

1. Overview of Zou I

Zou I is directed to "a thermal cycler which permits simultaneous treatment of multiple individual samples in independent thermal protocols, so as to implement large numbers of DNA experiments simultaneously in a short time." Ex. 1008, at [57]. Zou I explains that "[t]he basic principle that governs the present invention is that the thermally conductive cycler chamber is thermally isolated from its surroundings except for one or more heat transfer members through which all heat that flows in and out of the chamber passes," and "by placing at least one heating element in each transfer area, heat lost from the chamber can be continuously and precisely replaced, as needed." *Id.* at 3:55–62. Zou I teaches that "[t]his is achieved by placing, within each chamber, at least one temperature sensor per heating element and locating this sensor close to the heating elements," and, further, that the chamber can be rapidly cooled "by connecting the heat transfer areas to a heat sink through a high thermal conductance path." *Id.* at 3:62–67.

Figure 1a of Zou I is reproduced below.

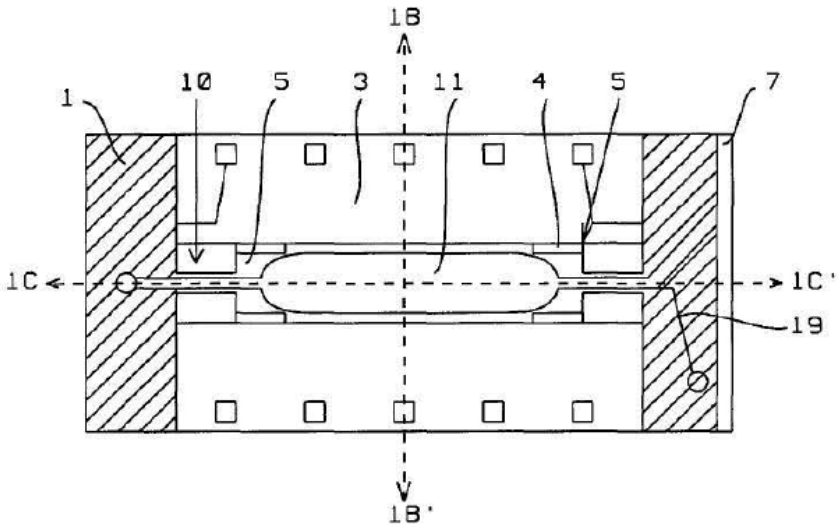

FIG. 1A

Figure 1a is a "plan view of a first embodiment of the invention" described in Zou I. *Id.* at 3:14–15. Chamber 11 "is connected at both ends to silicon frame 1 through monocrystalline silicon beams 10," with heaters 5 "at each end inside the heat transfer areas." *Id.* at 4:19–22. Each chamber also "contains at least one heat temperature sensor 4 for each heating element 5." *Id.* at 4:24–27. "Fluid bearing channels dispense fluid into and remove fluid from chamber 11" through silicon beams 10. *Id.* at 4:28–30. Unprocessed fluid is stored in common reservoir 7, and then directed to chamber 11 through fluid bearing channel 31. *Id.*at 4:31–33.

Figure 4 of Zou I is reproduced below.

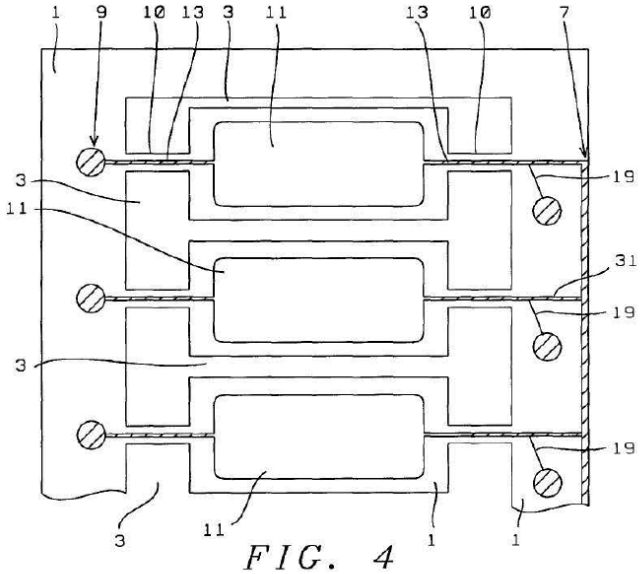

FIG. 4

Figure 4 depicts "an example of several chambers integrated to form a single multi-sample recycling unit." *Id.* at 5:4–6. "[I]ndividual chambers 11 are positioned inside the interior open area of silicon frame 1 and are connected to it through silicon beams 10," and, "except for these beams, the chamber is always thermally isolated from the frame by open space 3." *Id.* at 5:6–11.

2. Overview of Pease

Pease describes systems, including methods and apparatus, "for microfluidic processing of samples using a microfluidic device having an array of thin-film electronic devices." Ex. 1010 ¶ 35. Pease teaches that "the array may include an arrangement of thermal control devices and associated thermal control features that enables independent temperature control of closely spaced regions of fluid disposed adjacent the array." *Id.* ¶ 40. Pease also teaches that thermal control zones "are isolated so that each zone may be adjusted independently to a different temperature," and "may correspond to regions under different fluid chambers and/or different regions under one fluid chamber." *Id.* ¶ 48.

Pease describes an embodiment of a microfluidic system "for processing and analysis of samples, particularly samples containing nucleic acids." *Id.* ¶ 71. The system includes a control apparatus and an integrated cartridge that is configured to be electrically coupled to the control apparatus. *Id.* Figure 15 of Pease is reproduced below.

Fig. 15

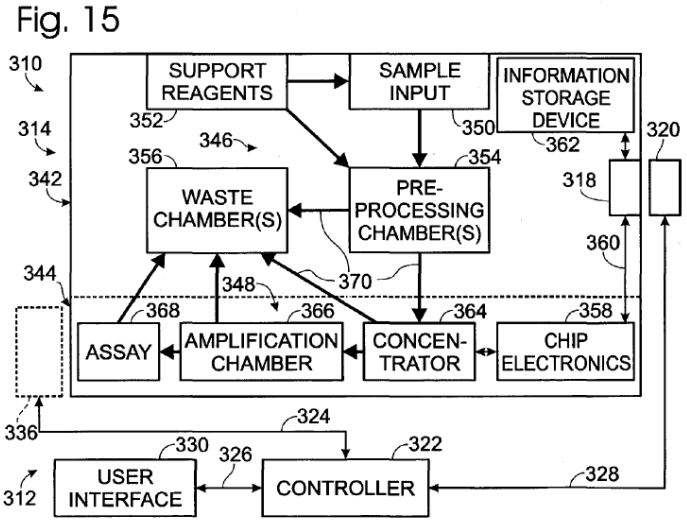

Figure 15 is a schematic view of the cartridge and control apparatus, "illustrating movement of fluid, sample, electricity, digital information, and detected signals" in one of Pease's embodiments. *Id.* ¶ 19. In order to control processing in the cartridge, control apparatus 312 is configured to send and receive control signals to cartridge 314. *Id.* ¶ 72. Cartridge 314 can include detection electronics, which allows control apparatus 312 to receive signals from cartridge 314 that are utilized to determine the assay result. *Id.* Additionally, control apparatus 312 "may include one or more optical, mechanical, and/or fluid interfaces with cartridge 314." *Id.* ¶ 76. For example, optical interface 336 may send light to and/or receive light from cartridge 314, and "may act as a detection mechanism having one or more emitters and detectors to receive optical information from" cartridge 314. *Id.*

"Assay portion 344 is configured for further processing of nucleic acid in fluid network 348 after nucleic acid isolation in fluid-handling portion 342," and "relies on electronics or electronic circuitry 358, which may include thin-film electronic devices to facilitate controlled processing of [the] nucleic acids." *Id.* ¶ 84. Amplification chamber 366 may be used to copy one or more target nucleic acids from among the concentrated nucleic acids, using an amplification reaction. *Id.* ¶ 90. Pease explains that "amplification may involve thermal cycling (for example, polymerase chain reaction (PCR) or ligase chain reaction (LCR))." *Id.* Optical interface 366 "may measure sample processing at any suitable position of assay portion 344," and "may include separate emitter-detector pairs for monitoring amplification of nucleic acids in amplification chamber 366, and for

detecting binding and/or position of amplified nucleic acids after processing in assay chamber 368." *Id.* ¶ 92.

3. Claims 1–6, 9, 10, 18–20, 23–25, 28, and 30–32

Claim 1 recites, among other elements, "a detector configured to detect the presence of an amplification product in the respective PCR reaction zone." Ex. 1002, 46:18–19. Petitioner contends that Pease meets this limitation of claim 1 because "Pease provides that the device may include detectors for monitoring amplification of nucleic acids in PCR amplification chambers." Pet. 39–40 (citing Ex. 1001 ¶ 143; Ex. 1010 ¶¶ 76, 90, 92). Patent Owner responds that "Petitioner has not shown that Pease's optical interface is configured to detect an ***amplification product*** in a respective PCR reaction zone of multiple PCR reaction zones of a multi-lane cartridge, and in the PCR reaction zone where the amplification occurs." Prelim. Resp. 47 (emphasis in original).

We are persuaded, based on the record before us, that Petitioner has established sufficiently that Pease discloses a detector configured to detect the presence of an amplification product in the PCR reaction zone as required by claim 1. Pease describes an optical interface that "may act as a detection mechanism having one or more emitters and detectors to receive optical information from the cartridge," such as information relating "to assay results produced by processing within the cartridge." Ex. 1010 ¶ 76. Pease teaches that the cartridge has an amplification chamber within which PCR may be performed. *Id.* ¶90. Pease further teaches that the optical interface "may include separate emitter-detector pairs for monitoring amplification of nucleic acids" in the amplification chamber, and "for detecting binding and/or position of amplified nucleic acids after processing

in" the assay chamber. *Id.* ¶ 92. Taken together, these disclosures indicate that Pease's optical interface can be configured to detect an amplification product in the PCR reaction zone (namely, the amplification chamber).

We have considered Patent Owner's arguments and do not consider them to be persuasive on this record. For example, Patent Owner argues that Pease does not disclose an optical interface that is configured to detect an amplification product "in a respective PCR reaction zone of multiple PCR reaction zones of a multi-lane cartridge, and in the PCR reaction zone where the amplification occurs." Prelim. Resp. 47. We understand Petitioner, however, to be relying on Zou I as disclosing a multi-lane microfluidic unit with each lane comprising a PCR reaction zone. *See* Pet. 34. Thus, Patent Owner's argument in this regard attacks the teachings of Pease individually, rather than the manner in which Petitioner relies upon Pease in combination with Zou I. Nonobviousness cannot be established by attacking the references individually when the ground of unpatentability is predicated upon a combination of prior art disclosures. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Petitioner also contends that a "POSA would have been motivated to combine the multiplexing PCR unit of Zou I with a conventional integrated machine" such as in Pease, with an expectation of success, at least because: (1) Zou I "teaches combining its microfluidic unit into existing machines suitable for performing biochemical reactions," and the Pease machine is "similar to the 'macro thermal cycler' or 'total analysis' systems that Zou I suggested;" (2) the combination of Zou I and Pease "would have provided the known benefit of integrating detection with the amplification reaction process," which "would predictably allow real-time detection of

amplification" and "could also be used to improve the quality and accuracy of PCR amplification;" (3) "the combination, and in particular the cartridges of . . . Pease, would have predictably provided the necessary interfacing with the outside world;" (4) "the combination would have predictably improved reproducibility, reliability, and safety;" and (5) "combining Zou I to be operated by a standard machine such as disclosed by" Pease "would have been no more than applying known techniques to yield predictable results." *Id.* at 29–33.

Patent Owner responds that Petitioner does not establish that a POSA would have been motivated to combine Zou I with Pease in the fashion suggested by Petitioner and have a reasonable expectation of success in doing so. Prelim. Resp. 52–68. For example, Patent Owner argues that "[t]echnical constraints inherent in [Zou I's] thermal cycler would have dissuaded a POSA from modifying [Zou I's] system to perform optical detection of an amplification product within [Zou I's] chambers." *Id.* at 54. In that regard, Patent Owner argues that Zou I's thermal cycler is made of a silicon substrate, which, according to Patent Owner, "is not transparent, often limiting the application of real-time optical detection to the PCR microfluidic devices." *Id.* at 55 (emphasis omitted) (quoting Ex. 2002, 247). Patent Owner also argues that a POSA would have recognized that the glass top sheet applied over Zou I's silicon chambers creates "substantial impediments to optical detection of an amplification product in [Zou I's] chambers." *Id.* (citing Ex. 2005 ¶¶ 42–43). According to Patent Owner, "Petitioner glosses over the practical impediments" the combination of Zou I and Pease "would face, and never addresses the ways in which silicon would

optically interfere with efforts to detect an amplification product within [Zou I's] chambers." *Id.* at 57.

Patent Owner further argues that Petitioner's contention that the combination of Zou I and Pease would have provided the known benefit of integrating detection with the amplification process "presupposes that a POSA may have attempted any detection, much less real-time detection, of an amplification product in [Zou I's] reaction chambers," and "incorrectly assumes" that "Pease would supply the real-time detection of an amplification product in multiple respective chambers in [Zou I's] thermal cycler, in the location where amplification occurs." Prelim. Resp. 64. Patent Owner also argues that "Petitioner fails to recognize that" Zou I's "notion of an integrated machine includes separate, offline detection," and that combining Zou I and Pease "would not satisfy the claim limitations because" Pease does not teach the claimed detector. *Id.* at 65.

We have considered these and other arguments raised by Patent Owner, but are persuaded, based on the current record, that Petitioner has established a reasonable likelihood of prevailing on its assertion that independent claim 1, and claims 2–6, 9, 10, 18–20, 23–25, 28, and 30–32 that depend, directly or indirectly, therefrom, would have been obvious over the combined teachings of Zou I and Pease. The parties will have the opportunity to further develop these facts and arguments during trial, and the Board will evaluate the fully-developed record at the close of the evidence. In particular, we encourage the parties to address, in subsequent briefing, Patent Owner's assertions that a POSA would not have had a reasonable expectation of success in achieving the claimed invention by combining the disclosures of Zou I and Pease.

4. Claim 33

Petitioner contends that Zou I discloses every element of independent claim 33, and, to the extent "Zou I does not expressly disclose a microfluidic cartridge," Pease does. Pet. 61. Patent Owner argues that Zou I does not disclose "introducing the plurality of samples into a multi-lane microfluidic cartridge" limitation of claim 33. Prelim. Resp. 49–52. Having found that Petitioner has established a reasonable likelihood of prevailing with respect to claims 1–6, 9, 10, 18–20, 23–25, 28, and 30–32 of the '708 patent, we institute review with respect to challenged claim 33 as well. *See* United States Patent and Trademark Office, *Guidance on the Impact of SAS on AIA Trial Proceedings*, Patent Trial and Appeal Board (April 26, 2018) ("As required by [*SAS Institute Inc. v. Iancu*, 138 S.Ct. 1348 (2018)], the PTAB will institute as to all claims or none.") ("*SAS* Guidance").

D. Obviousness over Zou I and McNeely

Petitioner contends that the combined teachings of Zou I and McNeely teach or suggest each limitation of claims 1–6, 9, 10, 18–20, 23–25, 28, and 30–33. Pet. 33–63. This ground relies on the same arguments as to Zou I as discussed above in Section II.C. *Id.* Petitioner also relies on the same arguments as to why a person of ordinary skill in the art would have been motivated to combine the references with a high expectation of success. Pet. 28–33. Patent Owner disputes the sufficiency of Petitioner's allegations. Prelim. Resp. 35–45, 49–68. A detailed analysis of this ground is not necessary at this time, and for purposes of this Decision, we do not address in detail Patent Owner's arguments regarding McNeely's disclosure or the sufficiency of Petitioner's allegations regarding motivation to combine Zou I and McNeely. *See SAS* Guidance. This does not constitute,

however, a determination regarding the persuasiveness of Patent Owner's arguments in this regard. In particular, we encourage the parties to address, in subsequent briefing, Patent Owner's assertions that McNeely does not disclose the detector limitation recited in claim 1.

E. Claims 7, 8, 11–17, 21, 22, 26, 27, and 29

Petitioner contends that dependent claims 7, 8, 11–17, 21, 22, 26, 27, and 29 would have been obvious over different combinations of Zou I, Pease, McNeely, Hsieh, Zou II, Duong, and Chow as set forth above in Section I.D. Patent Owner does not offer any arguments with respect to the portions of the cited references that purportedly teach the limitations of these dependent claims. Having found that Petitioner has established a reasonable likelihood of prevailing with respect to claims 1–6, 9, 10, 18–20, 23–25, 28, and 30–33 of the '708 patent, we also institute review with respect to challenged dependent claims 7, 8, 11–17, 21, 22, 26, 27, and 29. *See SAS* Guidance.

III. CONCLUSION

Based on the arguments in the Petition and Preliminary Response, and the evidence of record, we determine that Petitioner has demonstrated a reasonable likelihood that it will prevail on its challenge to at least one of the claims of the '708 patent.

Although we exercise our discretion and institute review, we remind the parties that we have not yet made a final determination as to the patentability of any of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted as to claims 1–33 of the '708 patent with respect to the grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 315(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this Decision.

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