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**PRUETZ LAW GROUP LLP**  
Adrian M. Pruetz (Bar No. 118215)  
ampruetz@pruetzlaw.com  
Erica J. Pruetz (Bar No. 227712)  
ejpruetz@pruetzlaw.com  
200 N. Sepulveda Blvd., Suite 1525  
El Segundo, CA 90245  
Phone: 310.765.7650  
Fax: 310.765.7641

**LEE TRAN & LIANG APLC**  
Enoch H. Liang (Bar No. 212324)  
ehl@ltlcounsel.com  
Steven R. Hansen (Bar No. 198401)  
srh@ltlcounsel.com  
601 S. Figueroa Street, Suite 4025  
Los Angeles, CA 90017  
Phone: 213.612.3737  
Fax: 213.612.3773

Attorneys for Plaintiff  
NETLIST, INC.

UNITED STATES DISTRICT COURT  
  
NORTHERN DISTRICT OF CALIFORNIA  
  
OAKLAND DIVISION

NETLIST, INC.,  
  
Plaintiff,  
  
v.  
  
GOOGLE INC.,  
  
Defendant.

CASE NO. CV-09-05718 SBA  
[Related to Case No. CV-08-04144 SBA]  
  
**PLAINTIFF NETLIST, INC.'S OPENING  
CLAIM CONSTRUCTION BRIEF**



**TABLE OF AUTHORITIES**

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14  
15  
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22  
23  
24  
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## INTRODUCTION

1  
2 This case concerns Google’s infringement of Netlist’s U.S. Patent No. 7,619,912 (the  
3 “’912 Patent”), a continuation of U.S. Patent No. 7,289,386 which is the patent-in-suit in Related  
4 Case No. CV-08-04144 SBA. Like the ‘386 Patent, the ‘912 Patent is directed to memory  
5 modules with features that overcome computer system constraints that limit the numbers of  
6 memory devices that may be used on the module. The ‘912 Patent issued in November 2009  
7 during the pendency of the Related Case.

8 The parties have stipulated to all of the constructions that were previously agreed-upon or  
9 ordered by the Court in the Related Case. The parties dispute the construction of the terms  
10 “bank,” “set of input control signals” (and variants thereof), “set of output control signals” (and  
11 variants thereof), “operatively coupled/operationally coupled” and “at a time.”

12 Netlist’s constructions are based on the intrinsic evidence (claim language, specification,  
13 and file history) and provide the ordinary meaning of these terms as understood by those skilled in  
14 the art. Netlist defines “bank” as “a group of memory cells or locations inside a memory device.”  
15 Netlist defines “operatively coupled” and “operationally coupled” to mean “functionally  
16 cooperating with.” Given the stipulated meanings of “signals” and “control signals,” no  
17 construction of “set of input control signals” or “set of output control signals” (or their variants) is  
18 required. The well-understood phrase “at a time” similarly requires no construction.

19 In sharp contrast, Google’s constructions run afoul of the canons of claim construction and  
20 find no support in the intrinsic record. Google’s constructions add and delete words from the  
21 construed phrases and seek to change the scope of the asserted claims, not explain their meaning.  
22 Most notably, Google construes the *exact same claim terms* differently depending on the claim in  
23 which they appear. For example, the phrase “set of input control signals” occurs identically in  
24 claims 1 and 28. However, Google construes the phrase differently in each of those claims.  
25 Google similarly construes “set of output control signals” differently for claims 1 and 28.

26 Google’s definition of “bank” would cover any “addressable unit of memory cells”  
27 regardless of whether it is internal to a memory device. Google’s construction is based on an  
28

1 inapplicable dictionary definition that confuses the terms “bank” and “rank” because it allows  
2 multiple memory *devices* to comprise a “bank.” However, Google’s definition cannot be  
3 reconciled with the consistent and repeated indication in the ‘912 Patent specification and  
4 applicable dictionary definitions that a “bank” is *internal* to a memory device.

5 Google also seeks to write out “operatively” and “operationally” from the phrases  
6 “operatively coupled” and “operationally coupled” by imposing a requirement of direct or indirect  
7 physical connection between memory module components. As indicated by the parties’ agreed-  
8 upon construction of “coupled to the printed circuit board,” the unmodified term “coupled”  
9 connotes direct or indirect electrical connection. Both Federal Circuit precedent and dictionary  
10 definitions make clear that the additional modifiers “operatively” or “operationally” refer to the  
11 functional coupling described by Netlist’s construction, not the physical coupling required by  
12 Google’s construction.

13 Google also asks the Court to judicially rewrite the phrase “at a time” to mean “at the same  
14 time” notwithstanding the clear difference in meaning between the phrases. Google’s construction  
15 lacks support in the intrinsic record and would also improperly render claims 18 and 20 redundant.

16 In addition, Google has asserted that claims 10, 11 and 45 are invalid for indefiniteness,  
17 improperly seeking to circumvent the requirements for seeking summary judgment of invalidity  
18 under the *Federal Rules of Civil Procedure* and the Local Rules of this Court. Google’s  
19 indefiniteness arguments were not raised in Google’s Invalidation Contentions and Google has not  
20 sought leave to raise them, as required by this District’s Patent Local Rules. Moreover, Google  
21 applied its alleged prior art to claims 10 and 11 in its Invalidation Contentions, which belies the  
22 contention that the claims are indefinite. With respect to claim 45, Google relies on an implicit  
23 construction of the phrase “the at least one integrated circuit element comprising a logic element, a  
24 register, and a phase lock loop” in claim 39, from which claim 45 depends, which would require  
25 all three components to be combined in a single integrated circuit. Such a construction is not  
26 consistent with the claim language or the specification. Thus, Netlist respectfully requests that  
27 the Court reject Google’s constructions and adopt Netlist’s constructions in their entirety.

1 **THE '912 PATENT**

2 The '912 Patent issued on November 17, 2009 from an application claiming priority to the  
3 '386 Patent that is the subject of the Related Case.<sup>1</sup> The '912 Patent (Hansen Decl. Exh. A). Like  
4 the '386 Patent, the '912 patent is directed to memory modules capable of expanding the number  
5 of memory devices that can be accessed by a computer. The individual memory devices (e.g.,  
6 "dynamic random access memory" or "DRAM" chips) on which information is stored can be  
7 combined into discrete sets or "ranks" to effectively increase the capacity of the memory module.  
8 The '912 Patent explains how these ranks are used to increase capacity as follows:

9 The memory capacity of a memory module increases with the number of memory  
10 devices. The number of memory devices of a memory module can be increased by  
11 increasing the number of memory devices per rank or by increasing the number of  
12 ranks. For example, a memory module with four ranks has double the memory  
13 capacity of a memory module with two ranks and four times the memory capacity  
14 of a memory module with one rank.

15 *Id.* at 2:23-30. A given total amount of *module* memory (e.g., 4GB) may be provided by  
16 using a small number of high density memory devices or a large number of low density memory  
17 devices. As the patent explains, it is economically advantageous to use the latter approach  
18 because the lower density memory devices are significantly less expensive on a per bit basis:

19 Market pricing factors for DRAM devices are such that higher-density DRAM  
20 devices (e.g., 1-Gb DRAM devices) are *much more than twice* the price of lower-  
21 density DRAM devices (e.g., 512 Mb DRAM devices). In other words, the price  
22 per bit ratio of the higher-density DRAM devices is greater than that of the lower  
23 density DRAM devices.

24 *Id.* at 4:59-64 (emphasis added)

25 Unfortunately, many computers are unable to exploit the economic benefits of lower  
26 density memory devices because they are limited in the number of ranks that they can  
27 communicate with:

28 Most computer and server systems support one-rank and two-rank memory  
modules. By only supporting one-rank and two-rank memory modules, the memory  
density that can be incorporated in each slot is limited.

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29 <sup>1</sup> For the Court's convenience, the '912 Patent is attached as Exhibit A to the Declaration of Steven R.  
30 Hansen ("Hansen Decl."), submitted concurrently herewith.

1 *Id.* at 2:38-42.

2 It is against this backdrop that the claimed invention of the ‘912 Patent was developed.  
3 The earlier ‘386 Patent broadly claimed memory modules with a logic element that provides  
4 output control and command signals corresponding to more memory devices and ranks of memory  
5 devices than do the input control and command signals received by the logic element. The ‘912  
6 Patent claims specify further details of the inventive memory modules. In particular, the asserted  
7 independent claims<sup>2</sup> specify that the memory modules include a circuit having both a logic  
8 element and a register and also specify additional details of the input signals provided to the logic  
9 element portion of the circuit. The claims also specify that the claimed “memory devices” are  
10 “DDR” or “double data rate” memory devices and describe a phase lock loop device that is  
11 operatively coupled to the DDR memory devices, the logic element, and the register. For  
12 example, claim 1 reads as follows (with disputed claim terms shown in bold):

13 1. A memory module connectable to a computer system, the memory module  
14 comprising:

15 a printed circuit board;

16 a plurality of double-data-rate (DDR) memory devices mounted to the printed  
17 circuit board, the plurality of DDR memory devices having a first number of DDR memory  
18 devices arranged in a first number of ranks;

19 a circuit mounted to the printed circuit board, the circuit comprising

20 a logic element and a register, the logic element receiving a set of input  
21 control signals from the computer system, the set of input control signals comprising at  
22 least one row/column address signal, **bank** address signals, and at least one chip-select  
23 signal, the **set of input control signals** corresponding to a second number of DDR  
24 memory devices arranged in a second number of ranks, the second number of DDR  
25 memory devices smaller than the first number of DDR memory devices and the second  
26 number of ranks less than the first number of ranks, the circuit generating a **set of output**  
27 **control signals** in response to the **set of input control signals**, the **set of output control**  
28 **signals** corresponding to the first number of DDR memory devices arranged in the first  
number of ranks, wherein the circuit further responds to a first command signal and the **set**

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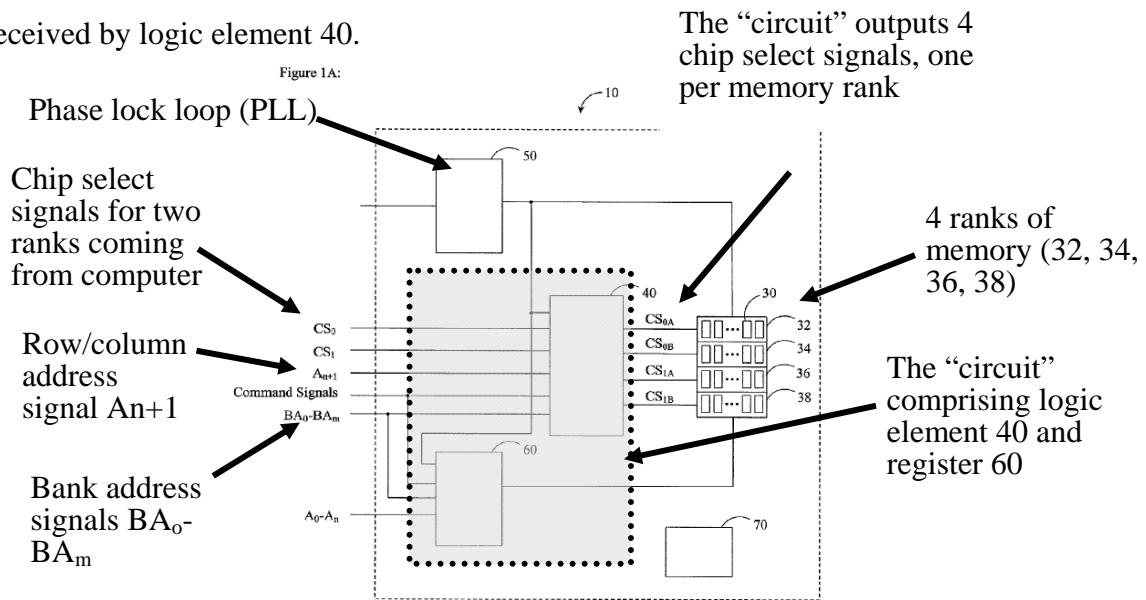
26 <sup>2</sup> The asserted claims are 1, 3, 4, 6-11, 15 18-22, 24-25, 27-29, 31-34, 36-39, 41-45, and 50. Among  
27 these, claims 1, 15, 28, and 39 are independent.



1 of input control signals from the computer system by generating and transmitting a  
 2 second command signal and the set of output control signals to the plurality of memory  
 3 devices, the first command signal and the set of input control signals corresponding to  
 4 the second number of ranks and the second command signal and the set of output control  
 5 signals corresponding to the first number of ranks; and

6 a phase-lock loop device mounted to the printed circuit board, the phase-lock loop  
 7 device **operatively coupled** to the plurality of DDR memory devices, the logic element,  
 8 and the register.

9 The '912 Patent at 32:59-33:27 (Hansen Decl., Exh. A). Figure 1A illustrates an embodiment of  
 10 the claimed invention and shows a memory module 10 that includes a circuit comprising a logic  
 11 element 40 and a register 60. The figures shows how input control signals such as a row/column  
 12 address signal ( $A_{n+1}$ ), bank address signals ( $BA_0$ - $BA_m$ ), and chip select signals ( $CS_0$  and  $CS_1$ ), are  
 13 received by logic element 40.



24 The “circuit” shown in FIG. 1A comprises logic element 40 and register 60. The parties have  
 25 stipulated that a “logic element” is “a hardware circuit that performs a predefined function on  
 26 input signals from the computer system and presents the resulting signals as its output” and that a  
 27 “register” is “a circuit component or components that receive, buffer, and transmit signals.”  
 28 Exhibit A to Joint Claim Construction and Prehearing Statement, dated June 25, 2010 (“Joint CC  
 Stmt”) (Dkt. 45).

As the parties have also stipulated, each rank is “enabled to receive and transmit data by a

1 common chip select signal.” Exh. A to Joint CC Stmt (Dkt. 45). The control input signals coming  
2 into the logic element of FIG. 1A include two chip select signals, and therefore, correspond to and  
3 are configured to control two ranks of memory. In certain embodiments of the module depicted in  
4 Figure 1A, output control signals are transmitted from the circuit that comprises the logic element  
5 40 and register 60 to the memory devices 30. Because four output chip select signals ( $CS_{0A}$ ,  $CS_{0B}$ ,  
6  $CS_{1A}$ , and  $CS_{1B}$ ) are provided, the output control signals correspond to and are configured to  
7 control four ranks of memory. One example of a module configured in this manner is described as  
8 follows:

9 In certain embodiments, the computer system is configured for a number of ranks  
10 per memory module which is smaller than the number of ranks in which the  
11 memory devices 30 of the memory module 10 are arranged. In certain such  
12 embodiments, the computer system is configured for two ranks of memory per  
13 memory module (providing two chip-select signals  $CS_0$ ,  $CS_1$ ) and the plurality of  
14 memory modules 30 of the memory module 10 are arranged in four ranks, as  
15 schematically illustrated by FIG. 1A.

16 The ‘912 Patent at 7:19-28 (Hansen Decl., Exh. A).

17 The module of FIG. 1A also includes a phase-lock loop device 50. The parties have  
18 stipulated that a “phase lock loop” is “a device for generating a clock signal that is related to the  
19 phase of an input reference signal.” Exh. A to Joint CC Stmt. (Dkt. 45). The phase-lock loop 50  
20 of FIG. 1A provides clock signals to the memory devices, logic element and register:

21 In certain embodiments, as schematically illustrated in FIG. 1A, the memory  
22 module 10 further comprises a phase-lock loop device 50 coupled to the printed  
23 circuit board 20 and a register 60 coupled to the printed circuit board 20. In certain  
24 embodiments, the phase-lock loop device 50 and the register 60 are each mounted  
25 on the printed circuit board 20. In response to signals received from the computer  
26 system, the phase-lock loop device 50 transmits clock signals to the plurality of  
27 memory devices 30, the logic element 40, and the register 60.

28 The ‘912 Patent at 5:22-31 (Hansen Decl., Exh. A).

**ARGUMENT**

**I. LEGAL STANDARD**

The Federal Circuit’s *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), lays out the framework for claim construction analysis. Generally, a claim term has its ordinary and customary meaning—the meaning of the term to a person of ordinary skill in the art. *Id.* at 1312-13; *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The Federal Circuit classifies claim construction evidence into two categories, intrinsic and extrinsic. Intrinsic evidence consists of the claim language, specification, and file history. *Vitronics*, 90 F.3d at 1582. Extrinsic evidence consists of evidence outside the patent document and file history, including dictionaries, learned treatises and expert testimony. *Id.* at 1584. However, the Federal Circuit has “viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms.” *Phillips*, 415 F.3d at 1318. Moreover, it is improper to base a claim construction on extrinsic evidence if the intrinsic evidence is sufficient to construe the claim. *Vitronics*, 90 F.3d at 1584 (“Only if there were still some genuine ambiguity in the claims, after consideration of all available intrinsic evidence, should the trial court have resorted to extrinsic evidence, such as expert testimony, in order to construe claim 1”).

The specification “is always highly relevant to the claim construction analysis,” *Phillips*, 415 F.3d at 1315 (citations omitted). However, it is improper to limit the claims to unclaimed aspects of the specification embodiments, a practice known as “importing” limitations. *Liebel-Flarshiem v. Medrad*, 348 F.3d 898, 906 (Fed. Cir. 2004).

**II. THE COURT SHOULD ADOPT NETLIST’S CONSTRUCTIONS IN THEIR ENTIRETY**

For the reasons set forth below, the Court should adopt Netlist’s proffered constructions in their entirety. Google’s constructions run afoul of the canons of claim construction in numerous ways, including by defining the same claim terms *differently* in different claims and by construing terms in a manner that cannot be reconciled with the text of the ‘912 Patent.

1           **A. “Bank”**

2           The parties’ central dispute over the construction of this term concerns Google’s attempt to  
3 define “bank” so that it would cover any “addressable unit of memory cells” as opposed to those  
4 units that are internal to a memory device. Thus, Google’s construction would unjustifiably  
5 expand the asserted claims to cover alleged prior art memory modules having memory devices that  
6 lack internal sub-arrays (i.e., actual banks) of rows and columns.

7           Netlist’s construction of “bank” is “a group of memory cells or locations *inside a memory*  
8 *device.*” Exh. B to Joint CC Stmt at 1 (Dkt. 45). The ‘912 Patent repeatedly makes clear that the  
9 term “bank” refers to memory locations that are inside a memory device, such as a DRAM chip:

10                     For example, a 512-Megabyte memory module (termed a "512-MB" memory  
11                     module, which actually has  $2^{29}$  or 536,870,912 bytes of capacity) will typically  
12                     utilize eight 512-Megabit DRAM devices (each identified as a "512-Mb" DRAM  
13                     device, each actually having  $2^{29}$  or 536,870,912 bits of capacity). **The memory**  
14                     **cells (or memory locations) *of each* 512-Mb DRAM device can be arranged in**  
                          **four banks**, with each bank having an array of  $2^{24}$  (or 16,777,216) memory  
                          locations arranged as  $2^{13}$  rows and  $2^{11}$  columns, and with each memory location  
                          having a width of 8 bits.

15           The ‘912 Patent at 1:40-44 (Hansen Decl., Exh. A) (emphasis added). The ‘912 Patent describes  
16 the internal configuration of 1 Gb DRAM devices similarly: “The memory locations of each 1-Gb  
17 DRAM device can be arranged in four banks, with each bank having an array of memory locations  
18 with  $2^{14}$  rows and  $2^{11}$  columns . . . .” Other references to the term “bank” similarly make clear that  
19 it refers to a group of memory cells or locations inside a memory device:

- 20                     • “each of the *internal* banks (e.g., 4 internal banks) per memory device 30”  
21                     (*Id.* at 21:59-61) (emphasis added)
- 22                     • “Byte 17: Defines the number of banks *internal* to the DRAM device . . . .”  
23                     (*Id.* at 9:57-58) (emphasis added)
- 24                     • “Each memory device 31, 33 has . . . a first number of banks of memory  
25                     locations” (*Id.* at 10:59-62)

26           Nowhere in the ‘912 Patent is the term “bank” used to refer to addressable units of memory cells  
27 other than those internal to a memory device.

1 Extrinsic evidence further supports Netlist’s definition. For example, the JEDEC  
2 *Dictionary of Terms for Solid State Technology* defines a “bank address” as follows: “In a RAM  
3 that has multiple banks in its architecture, the address used to select any one of the available  
4 banks.” Hansen Decl., Exh. B. Moreover, *Google’s own “expert,”* William Hoffman, confirms  
5 Netlist’s definition:

6 Q: And a one-gigabit DRAM has eight banks in it, right?

7 A: Yes.

8 \*\*\*

9 Q: This Dell 074 patent uses the term bank select signal, right?

10 A: Yes.

11 Q. And in that—in the context of this particular reference, bank refers to an  
12 internal sub-array within the individual RAM chips, right?

13 A: That’s correct.

14 Hoffman Deposition at 52:1-3 (emphasis added); 235:23-236:1 (emphasis added) (Hansen Decl.,  
15 Exh. C). Mr. Hoffman went on to note that “banks” and “ranks” have different meanings, with  
16 “banks” referring to memory *within* a chip. *Id.* at 267:20-268:2.

17 In support of its construction, Google offers one piece of extrinsic evidence, an IEEE  
18 dictionary. In contrast to the clear meaning of “banks” evidenced by the specification of the ‘912  
19 Patent, the definition cited by Google expressly refers to groups of memory chips and therefore  
20 conflates the meaning of “rank” and “bank”

21 **bank** . . . .(C) A contiguous section of addressable memory. For example, eight  
22 memory devices, each of which is 64kB by 1: forming a 64kB x8 memory bank.

23 The Authoritative Dictionary of IEEE Standards Terms, Seventh Ed. 2000 (Hansen Decl., Exh. D)  
24 (cited by Google in Exh. B to Joint CC Stmt. At 1) (emphasis added). While the Federal Circuit  
25 has sanctioned the use of dictionary definitions in construing patent claims, it has only done so  
26 only “so long as the dictionary definition does not contradict any definition found in or ascertained  
27 by a reading of the patent documents.” *Phillips.*, 415 F.3d at 1322-1323 (citations omitted).

1 Because it cannot be reconciled with the meaning of “bank” as ascertained from the text of the  
2 ‘912 Patent, Google’s definition must be rejected.

3 **B. “the at least one integrated circuit element comprising a logic element, a register,  
4 and a phase lock loop”**

5 This phrase is recited in claim 39. The meaning of the phrase is at issue because (as  
6 discussed in Section II.F, below) Google argues that claim 45--which depends from claim 39--is  
7 indefinite. According to Google, the phrase “the at least one integrated circuit element  
8 comprising a logic element, a register, and a phase lock loop” requires a single integrated circuit  
9 element with all three components. Exh. B to Joint CC Stmt at 18 (Dkt. 45). According to  
10 Google, because dependent claim 45 recites that at least two or more of the logic element, register,  
11 and phase lock loop are portions of a single component, the claim is impermissibly broader than  
12 independent claim 39, from which it depends. *Id.* Google refuses to acknowledge that its  
13 indefiniteness argument hinges on the construction of “the at least one integrated circuit element . .  
14 . “ in claim 39 and asks that the Court *not* construe the phrase. *Id.* at 2.

15 The subject phrase appears as follows in the body of claim 39:

16 at least one integrated circuit element mounted to the printed circuit board, **the at  
17 least one integrated circuit element comprising a logic element, a register, and  
a phase-lock loop . . . .**

18 The ‘912 Patent at 36:48-51 (Hansen Decl., Exh. A) (emphasis added). Netlist construes the  
19 bolded phrase to mean “one or more integrated circuit elements, wherein a logic element, a  
20 register, and a phase-lock loop are distributed among the one or more integrated circuit elements.”  
21 Thus, one or more integrated circuit elements *collectively* provide the logic element, register, and  
22 phase-lock loop. The plain language of the claim supports Netlist’s construction. The phrase “at  
23 least one” clearly means “one or more” and would encompass one, two, three, etc. integrated  
24 circuit elements. To illustrate the meaning of the phrase, the number “three” can be substituted  
25 into the body of the claim:

26 **[three integrated circuit elements]** mounted to the printed circuit board, the  
27 **[three integrated circuit elements]** comprising a logic element, a register, and  
phase-lock loop

1 This interpretation is consistent with the exemplary memory module depicted in Figure 1A. As  
2 shown in the figure, module 10 includes a logic element 40, phase lock loop 50, and register 60.  
3 Each are depicted as separate components. Thus, the “at least one integrated circuit element” is  
4 “three” integrated circuit elements in Figure 1A. Google’s implicit construction of claim 39  
5 would exclude the embodiment of FIG. 1A because the figure does not depict all three  
6 components combined in a single integrated circuit. *See, Oatey Co. v. IPS Corp.*, 514 F.3d  
7 1271, 1276 (Fed. Cir. 2008); *see also MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d  
8 1323, 1333 (Fed. Cir. 2007) (holding that courts normally “do not interpret claim terms in a  
9 way that excludes embodiments disclosed in the specification”). Thus, the canons of claim  
10 construction require the adoption of Netlist’s claim construction and the rejection of Google’s  
11 implicit claim construction. In addition, Google’s construction would render claim 45  
12 indefinite. Even if the Court were to conclude that the intrinsic evidence is ambiguous as to  
13 whether Netlist’s construction or Google’s construction were correct, Federal Circuit  
14 precedent dictates adopting Netlist’s validity-preserving construction. *See Phillips*, 415 F.3d  
15 at 1327-1328 (claims should be construed to preserve their validity to resolve ambiguities that  
16 cannot otherwise be resolved based on the available tools of claim construction).

### 17 **C. Input Signal Limitations**

18 Google seeks constructions of several terms that describe the input signals or input control  
19 signals received by either a logic element or a circuit comprising a logic element. Exh. B to Joint  
20 CC Stmt at 3-10 (Dkt. 45). In particular, Google seeks *different constructions* for the *same* input  
21 signal claim terms depending on which claim the terms appear in. Thus, Google seeks claim-  
22 specific constructions of the phrases “set of input control signals,” which appears in claims 1 and  
23 28, “set of input signals,” which appears in claim 15, and “plurality of input signals” which  
24 appears in claim 39. None of these phrases requires construction. The only technical terms  
25 appearing in these phrases are “control signal” and “signal.” However, the parties have stipulated  
26 to their constructions. Exh. A to Joint CC Stmt. (Dkt. 45). Google seeks to construe the input  
27 signal limitations as entire phrases to graft additional limitations on to the asserted claims. If the  
28

1 Court is inclined to construe these phrases, it should simply substitute the stipulated constructions  
2 of “control signal” or “signal” where those terms appear.

3 Google’s attempt to define the input signal limitations differently in different claims  
4 violates a bedrock rule of claim construction: “Unless the patent otherwise provides, a claim term  
5 cannot be given a different meaning in the various claims of the same patent.” *Georgia-Pacific*  
6 *Corp. v. U.S. Gypsum Co.*, 195 F.3d 1322, 1331 (Fed. Cir. 1999). *See also, The Chamberlain*  
7 *Group, Inc. v. Lear Corp.*, 516 F.3d 1331, 1338 (Fed. Cir. 2008)(“the term ‘code’ presumptively  
8 should carry the same meaning throughout the patent”); *Southwall Technologies, Inc. v. Cardinal*  
9 *IG Co.*, 54 F.3d 1570, 1579 (Fed. Cir. 1995) (“‘Sputter-deposited dielectric’ cannot be interpreted  
10 differently in different claims because claim terms must be interpreted consistently”). For this  
11 reason as well, Google’s varying constructions of the input signal limitations should be rejected.

12 **1. “Set of Input Control Signals” (Claims 1 and 28)**

13 This phrase, which appears identically in claims 1 and 28, requires no construction. If the  
14 Court is inclined to construe the phrase, it should substitute the agreed-upon constructions of  
15 “control signals” and “signals” to construe the phrase as “a set of varying electrical impulse inputs  
16 that convey information for regulating system operations, including addresses and commands,  
17 from one point to another.” Exh. B to Joint CC Stmt at 3, 6-7 (Dkt. 45).

18 Google seeks different constructions of this phrase for claims 1 and 28. For claim 1,  
19 Google construes this phrase to mean “input control signals including at least one row/column  
20 address signal, bank address signals, and at least one chip select signal, **but not including a first**  
21 **command signal.**” Exh. B to Joint CC Stmt at 3 (Dkt. 45) (emphasis added). In contrast, for  
22 claim 28 Google construes this phrase to mean “input control signals including a row/column  
23 address signal, bank address signals, a chip-select signal, **and** an input command signal.” *Id.* at 6-  
24 8.

25 With respect to claim 28, Google’s construction is redundant of the claim language that is  
26 already present. Claim 28 expressly recites “the set of input control signals comprising a  
27 row/column address signal, bank address signals, a chip-select signal, and an input command  
28



1 signal.” Google’s construction does nothing to define the phrase “set of input control signals,” but  
2 instead, recites the particular species of “control signals” already set forth in the claim. Moreover,  
3 Google improperly excises the term “set” from the phrase in its construction.

4 With respect to claim 1, Google seeks to *exclude* a first command signal from the scope of  
5 “set of input control signals.” There are several flaws in Google’s construction. First, nowhere  
6 does the ‘912 Patent specification use “set of input control signals” in a manner that excludes a  
7 first command signal or any command signal. To the contrary, the ‘912 Patent specification  
8 makes clear that “input control signals . . . include[] . . . command signals.” The ‘912 Patent at  
9 6:56-63 (Hansen Decl., Exh. A). **No** embodiment of the ‘912 Patent requires exclusion of a first  
10 command signal from a set of input control signals.

11 Second, Google’s construction tautologically repeats the phrase “input control signals”  
12 making clear that its intent is not to define that phrase, but rather, to *graft additional limitations* to  
13 it. “The construction of claims is simply a way of elaborating the normally terse claim language in  
14 order to understand and explain, but not to change, the scope of the claims.” *Gart v. Logitech*, 254  
15 F.3d 1334, 1339 (Fed. Cir. 2001) (citations omitted). As with claim 28, Google’s construction  
16 also improperly excises the word “set” from the phrase “set of input control signals” in claim 1.

17 Google apparently justifies its exclusionary construction based on the fact that claim 1  
18 does not expressly list a “first command signal” as among the members of the “set of input control  
19 signals” and the fact that the claimed logic element “further responds to the first command signal  
20 and the set of input control signals.” The ‘912 Patent at 33:2-4 and 33:14-16 (Hansen Decl., Exh.  
21 A). Nothing in this language indicates that the set of input control signals cannot also include the  
22 first command signal. The claim simply requires a set of input control signals “*comprising* at least  
23 one row/column address signal, bank address signals, and at least one chip-select signal.” The  
24 ‘912 Patent at 33:2-4 (Hansen Decl., Exh. A) (emphasis added). “Comprising” is a term of art in  
25 patent law which is “inclusive or open-ended and does not exclude additional, unrecited elements  
26 or method steps.” *Georgia-Pacific Corp.*, 195 F.3d at 1327-1328, *citing*, Manual of Patent  
27 Examining procedure, § 2111.03 (6<sup>th</sup> ed. 1997). Google’s construction would exclude modules in

1 which a first command signal is received as part of a set of input control signals, in direct  
2 contravention of the established meaning of the term “comprising”. Moreover, the recitation of  
3 particular species of control signals in claim 1 does not limit the meaning of the broader genus of  
4 “set of input control signals.” It merely indicates that certain such control signals are required and  
5 that additional control signals may also be included. Thus, Google’s constructions of “set of input  
6 control signals” in claims 1 and 28 should be rejected.

7  
8 **2. “Set of Input Signals” (Claim 15)**

9 This phrase needs no construction. If the Court is inclined to construe the phrase, it should  
10 substitute the agreed-upon construction of “signal” to construe the phrase as “set of varying  
11 electrical impulse inputs that convey information from one point to another.” Exh. B to Joint CC  
12 Stmt at 5 (Dkt. 45).

13 Google seeks to construe this phrase in the same manner as “set of input control signals” in  
14 claim 1, i.e. to exclude a command signal. Thus, Google’s construction is “input address signals  
15 including at least one row/column address signal, bank address signals, and at least one chip select  
16 signal, ***but not including a command signal.***” Exh. B to Joint CC Stmt at 5 (Dkt. 45) (emphasis  
17 added). As discussed *supra* at II.C.1, Google’s construction is directly contrary to the ‘912 Patent  
18 specification which expressly provides that command signals are a type of input signal. Like  
19 claim 1, claim 15 recites particular species of control signals that must be provided (i.e., “a  
20 row/column address signal, bank address signals, and at least one chip select signal”). However,  
21 the claim uses the open-ended term “comprising” to indicate that other signals may be included in  
22 the set of input signals. Nothing in claim 15 or the specification indicates that “set of input  
23 signals” should exclude a command signal.

24 In addition, Google’s construction of “set of input signals” limits the term to “address  
25 signals.” However, nowhere does the specification or claims of the ‘912 Patent warrant such a  
26 limitation. The parties agreed that “signal” means a varying electrical impulse that conveys  
27 information from one point to another.” Exh. A to Joint CC Stmt (Dkt. 45). Google’s definition  
28 unjustifiably limits the claimed signals to address signals and should be rejected. In addition,

1 Google’s construction writes out the term “set” from the claim limitation and is improper for that  
2 reason as well.

### 3 **3. “Plurality of Input Signals” (Claim 39)**<sup>3</sup>

4 This phrase requires no construction. However, if the Court is inclined to construe the  
5 phrase, it should substitute “signal” to construe the phrase as “a plurality of varying electrical  
6 impulse inputs that convey information from one point to another.” Exh. B to Joint CC Stmt at 8  
7 (Dkt. 45).

8 Google’s construction redundantly lists the same species of control signals that are already  
9 recited in claim 39 by defining the phrase to mean “input control signals, including row address  
10 signals, column address signals, bank address signals, command signals, and a second number of  
11 chip-select signals less than the first number of chip-select signals.” The ‘912 Patent at 36:55-59  
12 (Hansen Decl., Exh. A) and Exh. B to Joint CC Stmt at 8 (Dkt. 45). Google’s construction  
13 improperly limits “signals” to “control signals.” In addition, Google’s construction writes out the  
14 term “plurality.” Accordingly, Google’s construction should be rejected.

#### 15 **D. Output Signal Limitations**

16 Google seeks constructions of several terms that describe the output signals generated by a  
17 circuit on the claimed memory modules. Exh. B to Joint CC Stmt at 10-15 (Dkt. 45). In  
18 particular, Google seeks *different constructions* for the *same* claim terms depending on which  
19 claim the terms appear in. Thus, Google seeks claim-specific constructions of the phrases “set of  
20 output control signals,” which appears in claims 1 and 28, “set of output signals,” which appears  
21 in claim 15, and “plurality of output signals” which appears in claim 39. None of these phrases  
22 requires construction. The only possible terms of art appearing in these phrases are “control  
23 signal” and “signal.” However, the parties have stipulated to the construction of both “control  
24

25 \_\_\_\_\_  
26 <sup>3</sup> This phrase was improperly identified as “plurality of input *control* signals” in Exhibit B of the Joint  
27 CC Stmt at page 8 (Dkt. 45).

1 signal” and “signal”. Exh. A to Joint CC Stmt (Dkt. 45). The phrases require no construction  
2 beyond that which has already been provided for their constituent terms. Google improperly seeks  
3 to construe the output signal limitations as entire phrases to graft additional limitations on to the  
4 asserted claims. If the Court is inclined to construe these phrases, it should simply substitute the  
5 stipulated constructions of “control signal” or “signal” where those terms appear. As with the  
6 input signal limitations discussed in Section II.C. *supra*, Google’s attempt to define the output  
7 signal limitations differently in different claims is inconsistent with established Federal Circuit  
8 precedent. *Georgia-Pacific Corp.*, 195 F.3d at 1331 (Fed. Cir. 1999); *The Chamberlain Group,*  
9 *Inc.*, 516 F.3d at 1338 (Fed. Cir. 2008); *Southwall Technologies, Inc.*, 54 F.3d at 1579 (Fed. Cir.  
10 1995).

11 **1. “Set of Output Control Signals” (Claims 1 and 28)**

12 As with “set of input control signals” discussed *supra* at II.C.1, this phrase requires no  
13 construction. If the Court is inclined to construe the phrase, it should substitute the agreed-upon  
14 definitions of “control signals” and “signal” to construe the phrase as a “set of varying electrical  
15 impulse outputs that convey information for regulating system operations, including addresses and  
16 commands, from one point to another.” Exh. B to Joint CC Stmt at 10 (Dkt. 45).

17 Google’s constructions of this phrase differ in claims 1 and 28 in the same manner  
18 described in Section II.C.1 for “set of input control signals.” With respect to claim 1, Google  
19 seeks to *exclude* “a second command signal” from the “set of output control signals” by construing  
20 the phrase as “output control signals, not including a second command signal.” Exh. B to Joint  
21 CC Stmt at 10 (Dkt. 45). In contrast, Google seeks to construe claim 28 to mean “output control  
22 signals including an output command signal.” *Id.* at 13. The same flaws pertain to these  
23 constructions as pertain to the varying constructions of “set of input control signals” proffered by  
24 Google. First, there is no justification in the claim language or specification for defining “set of  
25 output control signals” differently in claims 1 and 28. *Georgia-Pacific Corp.*, 195 F.3d at 1331.  
26 Second, Google’s constructions tautologically recite “output control signals.” Third, Google  
27 excises the term “set” from the construed phrase.

1 Google apparently justifies its exclusion of “second command signal” from the “set of  
2 input control signals” in claim 1 based on the fact that claim 1 recites a circuit “generating and  
3 transmitting a second command signal and the set of output control signals.” The ‘912 Patent at  
4 33:16-18 (Hansen Decl., Exh. A). However, Google’s exclusion of a second command signal  
5 directly contravenes the specification of the ‘912 Patent which provides that “a set of output  
6 control signals . . . includes address signals and command signals.” The ‘912 Patent at 6:62-63  
7 (Hansen Decl., Exh. A). Google’s construction would improperly exclude those circuits that  
8 generate a second command signal as part of a set of output control signals, notwithstanding any  
9 justification in the text of the ‘912 Patent specification or claims. While claim 28 does require that  
10 the set of output control signals *include* an output command signal, such a requirement does not  
11 mandate or justify the exclusion of a second command signal from the set of output control signals  
12 of claim 1.

## 13 2. “Set of Output Signals” (Claim 15)

14 Netlist believes that this phrase needs no construction. If the Court is inclined to construe  
15 the phrase, it should substitute the agreed-upon construction of “signal” to construe the phrase as  
16 “set of varying electrical impulse inputs that convey information from one point to another.” Exh.  
17 B to Joint CC Stmt at 12 (Dkt. 45).

18 Google seeks to construe this phrase in the same manner as “set of output control signals”  
19 in claim 1, i.e. to exclude a command signal. Thus, Google’s construction is “output address  
20 signals, ***not including a command signal.***” *Id.* at 12 (emphasis added). As discussed *supra* at  
21 II.D.1, Google’s construction is directly contrary to the ‘912 Patent specification which expressly  
22 provides that command signals are a type of output signal. The parties agreed that “signal” means  
23 a varying electrical impulse that conveys information from one point to another.” Exh. A to Joint  
24 CC Stmt (Dkt. 45). Nevertheless, Google’s definition unjustifiably limits the “output signals” to  
25 *address* signals and should be rejected. In addition, Google effectively writes out the term “set”  
26 from the claim limitation, and its construction is improper for that reason as well.  
27

1  
2  
3           **3.       “Plurality of Output Signals” (Claim 39)**

4           This phrase requires no construction. However, if the Court is inclined to construe the  
5 phrase, it should substitute the agreed-upon definition of “signal” to construe the phrase as “a  
6 plurality of varying electrical impulse outputs that convey information from one point to another.”  
7 Exh. B to Joint CC Stmt at 15 (Dkt. 45).

8           Google’s construction redundantly lists the same species of output signals that are already  
9 recited in claim 39 by defining the phrase to mean “output control signals, including row address  
10 signals, column address signals, bank address signals, command signals, and the first number of  
11 chip-select signals.” The ‘912 Patent at 36:63-66 (Hansen Decl., Exh. A) and Exh. B to Joint CC  
12 Stmt at 15 (Dkt. 45). Google’s construction also improperly limits “output signals” to “output  
13 control signals.” In addition, Google writes the term “plurality” out of its construction.  
14 Accordingly, Google’s construction should be rejected.

15           **E.   “Operatively Coupled/Operationally Coupled”**

16           Claims 1, 15, and 28 recite “a phase-lock loop device. . . *operatively coupled* to the  
17 plurality of DDR memory devices, the logic element, and the register.” The ‘912 Patent at 33:24-  
18 27; 34:53-56; and 36:1-4 (Hansen Decl., Exh. A) (emphasis added). Claim 39 recites “a phase-  
19 lock loop device *operationally coupled* to the plurality of DDR memory devices, the logic  
20 element, and the register.” *Id.* at 36:50-53 (emphasis added). Netlist’s construction of  
21 “operatively coupled” and “operationally coupled” is “functionally cooperating with.” Exh. B to  
22 Joint CC Stmt at 16 (Dkt. 45). Netlist’s construction is consistent with the ‘912 Patent  
23 specification’s description of the relationship between the phase-lock loop and the register, logic  
24 element, and memory devices: “In response to signals received from the computer system, the  
25 phase-lock loop device transmits clock signals to the plurality of memory devices 30, the logic  
26 element 50, and the register 60.” The ‘912 Patent at 5:28-31 (Hansen Decl., Exh. A). Dictionaries  
27 define “operative” as “functioning; having effect.” New Oxford American Dictionary (2d.ed.

1 2005) at 1193 (Hansen Decl. Exh. E). Moreover, the Federal Circuit has held that the similar  
2 phrase “operatively connected” is “a general descriptive term frequently used in patent drafting to  
3 reflect a functional relationship between claimed components.” *Innova/Pure Water, Inc. v. Safari*  
4 *Water Filtration, Systems, Inc.*, 381 F.3d 1111, 1118 (Fed. Cir. 2004); *see also*, Manual of Patent  
5 Examining Procedure (8<sup>th</sup> ed., Rev. July 2008) at § 2173.05(g) (Hansen Decl., Exh. F).

6 Google seeks to impose a requirement of direct or indirect electrical connection between  
7 the phase lock loop and each of the logic element, register, and memory devices by defining  
8 “operatively coupled” and “operationally coupled” to mean “directly or indirectly electrically  
9 connected to provide for operational signaling.” Exh. B to Joint CC Stmt at 16 (Dkt. 45). Nothing  
10 in the text of the ‘912 Patent justifies this restrictive definition. In addition, Google has cited no  
11 dictionary or other authoritative source that supports its definition. Exh. B to Joint CC Stmt at 17  
12 (Dkt. 45). Google’s definition is also inconsistent with the Federal Circuit’s holding in  
13 *Innova/Pure Water* and with the Manual of Patent Examining Procedure.

14 Google’s definition improperly writes-out the modifiers “operatively” and “operationally.”  
15 The word “coupled” already connotes the sort of indirect or direct electrical connection proposed  
16 by Google. Several claims in the ‘912 Patent recite the phrase “coupled to the printed circuit  
17 board,”<sup>4</sup> which the parties agree means “electrically connected to the printed circuit board.” Exh.  
18 A to Joint CC Stmt (Dkt. 45). Thus, the unmodified term “coupled” connotes physical coupling  
19 such as indirect or direct electrical connection. In contrast, the modifiers “operatively” and  
20 “operationally” indicate a *functional* coupling between the phase lock loop and each of the logic  
21 element, register, and memory devices. When the drafters of the ‘912 Patent claims sought to  
22 describe direct or indirect electrical connections between components, they used the word  
23 “coupled.” When they sought to describe a functional relationship between components, they  
24

---

25  
26 <sup>4</sup> For example, claim 28 recites “a phase-lock loop device *coupled* to the printed circuit board, the  
27 phase-lock loop device *operatively coupled* to the plurality of DDR DRAM devices, the logic element, and  
the register.” The ‘912 Patent at 36:1-4 (Hansen Decl., Exh. A).

1 used the phrases “operationally coupled” or “operatively coupled.” Thus, the correct construction  
2 of these phrases is “functionally cooperating with.”

3  
4 **F. Alleged Indefiniteness of Claim 45**

5 As discussed above in Section II.B, Google does not seek a construction of any terms in  
6 claim 45, but rather, asserts that the claim is indefinite. Exh. B to Joint CC Stmt at 18 (Dkt. 45).  
7 In attempting to obtain an adjudication of indefiniteness in these claim construction proceedings,  
8 Google seeks to circumvent the requirements for moving for summary judgment under *Fed. R.*  
9 *Civ. P.* 56 and the Local Rules of this Court. For this reason alone, the Court should refuse  
10 Google’s request to adjudicate its indefiniteness claim.

11 In addition, Google did not raise this basis of invalidity in its Invalidity Contentions.  
12 Exhibit 14 to Google’s Invalidity Contentions sets forth the bases of any contentions falling under  
13 35 U.S.C. § 112, such as indefiniteness, lack of enablement, and the written description  
14 requirement. Google’s Invalidity Contentions at 6 and Exhibit 14 (Hansen Decl., Exh. G).  
15 Nowhere is the alleged indefiniteness of claim 45 asserted. If Google wished to assert this  
16 defense, it was obligated to obtain an “order of the Court upon a timely showing of good cause”  
17 and amend its Invalidity Contentions accordingly. Patent Local Rule 3-6. Google has neither  
18 sought nor obtained such an order.

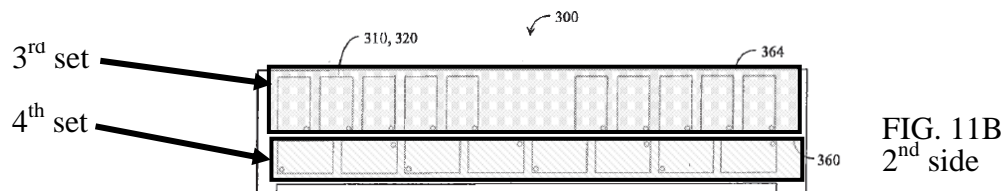
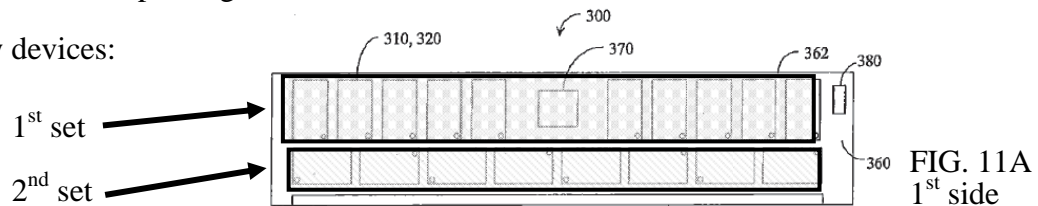
19 As explained in Section II.B., Google’s assertions of indefiniteness are predicated on an  
20 implicit and incorrect construction, namely that claim 39 requires a single integrated circuit that  
21 includes all three of a logic element, register, and phase-lock loop device. As properly construed,  
22 claim 39 simply requires one or more integrated circuit elements that *collectively* include a logic  
23 element, register, and phase-lock loop device. No single integrated circuit need include all three  
24 of these components. When claim 39 is properly construed, claim 45 further limits the claim by  
25 requiring that at least two of the three components (logic element, register, and phase-lock loop  
26 device) be provided in a single component. Thus, claim 45 is definite under 35 U.S.C. § 112, ¶2.  
27



1 **G. “Spaced From”**

2 The term “spaced from” appears in claims 10 and 11. Claim 10 configures the plurality of  
3 DDR memory devices into first, second, third, and fourth sets and provides that “the DDR  
4 memory devices of the second set [are] spaced from the DDR memory devices of the first set,”  
5 and that the “DDR memory devices of the fourth set [are] spaced from the DDR memory devices  
6 of the third set.” The ‘912 Patent at 33:67-34:1-3 (Hansen Decl., Exh. A). Neither Google nor  
7 Netlist seeks a construction of “spaced from.” However, Google contends that claims 10 and 11  
8 are indefinite by virtue of their recitation of the phrase. As with its indefiniteness challenge to  
9 claim 45, Google seeks to circumvent the rules governing summary judgment motions and has  
10 failed to raise this issue in its Invalidity Contentions. Hansen Decl., Exh. G. For these reasons  
11 alone, Google’s indefiniteness argument should be rejected.

12 If the Court is inclined to construe “spaced from” it should define the phrase as “positioned  
13 at a distance from.” Numerous figures in the ‘912 Patent depict the spacing of sets of memory  
14 devices. For example, Figures 11A and 11B show vertically and horizontally positioned sets of  
15 memory devices:



23 The word “spaced” has a well understood meaning and can readily be applied by the jury.  
24 Google’s complaint appears to be that the ‘912 Patent specification does not set forth particular  
25 distances for the claimed spacing. Exh. B to Joint CC Stmt at 19 (Dkt. 45). The Federal Circuit  
26 has held that the Patent Statute does not require the level of numerical specificity that Google  
27 demands. “If the claims, read in light of the specification, reasonably apprise those skilled in the  
28

1 art both of the utilization and scope of the invention, and if the language is as precise as the subject  
2 matter permits, the courts can demand no more.” *Andrew Corp. v. Gabriel Electronics, Inc.*, 847  
3 F.2d 819, 822 (Fed. Cir. 1988) (citations omitted). In *Andrew Corp.*, the Federal Circuit reversed  
4 a district court finding of indefiniteness that was based on alleged imprecision in the claim terms  
5 “approach each other,” “close to,” “substantially equal,” and “closely approximate.” The court  
6 held that “The criticized words are ubiquitous in patent claims” and that “[s]uch usages, when  
7 serving reasonably to describe the claimed subject matter to those of skill in the field of the  
8 invention, and to distinguish the claimed subject matter from the prior art, have been accepted in  
9 patent examination and by the courts.” *Id.* at 821.

10 In addition, Google itself has applied the “spaced apart” language of claims 10 and 11 to  
11 its alleged prior art. Exhibit 6 to Google’s Invalidation Contentions (Hansen Decl., Exh. G). Google  
12 determined that “spaced apart” was sufficiently definite to be applied to the alleged prior art. The  
13 Federal Circuit has “stated the standard for assessing whether a patent claim is sufficiently definite  
14 to satisfy the statutory requirement as follows: If one skilled in the art would understand the  
15 bounds of the claim when read in light of the specification, then the claim satisfies section 112  
16 paragraph 2.” *Exxon Research and Engineering Co. v., United States*, 265 F.3d 1371, 1375 (Fed.  
17 Cir. 2001) (citations omitted). Given its application of “spaced apart” to the alleged prior art,  
18 Google cannot now be heard to complain that “spaced apart” is indefinite.

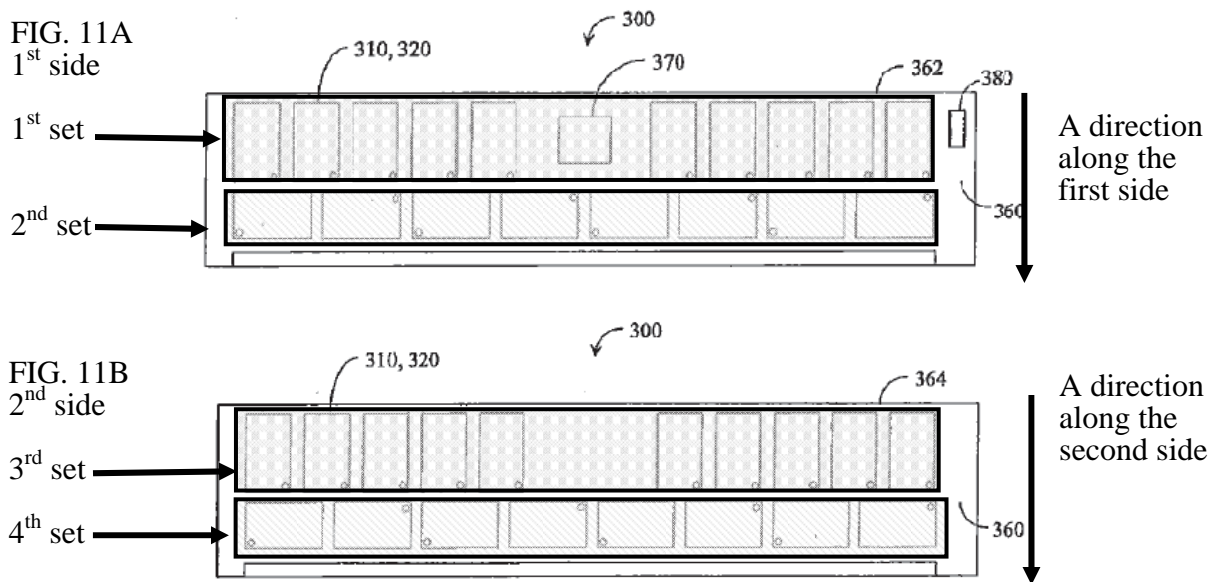
19 **H. “In a direction along the first side/in a direction along the second side”**

20 These phrases appear in claim 11. The ‘912 Patent at 34:4-9 (Hansen Decl., Exh. A).  
21 Netlist contends that no construction is required. As with claim 45 and “spaced apart,” Google  
22 does not seek a construction of this phrase, but rather, argues that it is indefinite. Again, Google  
23 improperly seeks to circumvent the requirements for seeking summary judgment. In addition,  
24 Google did not raise this issue in its Invalidation Contentions and failed to obtain leave to amend as  
25 required by Patent Local Rule 3-6.

26 Google’s indefiniteness attack is based on a mischaracterization of the claim language.  
27 Google argues that “The specification provides no instruction regarding the placement of *ranks* ‘in  
28

1 a direction.” Exh. B to Joint CC Stmt at 20 (Dkt. 45) (emphasis added). Claim 11 does not  
 2 require the spacing of ranks. Instead, it recites that the “DDR devices of the *first set* are spaced  
 3 apart from the DDR devices of the *second set* in a direction along the first side [of the printed  
 4 circuit board]” and that the “DDR devices of the *third set* are spaced apart from the DDR devices  
 5 of the *fourth set* in a direction along the second side [of the printed circuit board.]” The ‘912  
 6 Patent at 34:4-9 (Hansen Decl. Exh. A)(emphasis added). Nowhere does claim 11 (or claim 10  
 7 from which it depends) state that each “set” must be a “rank.” Instead, claim 13 (which is not  
 8 asserted) provides first, second, third, and fourth ranks that are spaced from one another. *Id.* at  
 9 34:17-19.

10 Figures 11A and 11B of the ‘912 Patent provide an example of the spacing of the claimed  
 11 sets in the claimed directions:



21 As is the case with “spaced apart,” Google’s Invalidation Contentions belie the alleged  
 22 indefiniteness of “in a first direction along the first side” and “in a direction along the second  
 23 side.” According to Google, Wong, U.S. Patent No. 6,414,868 allegedly “discloses the DDR  
 24 devices of the second set being spaced apart from the DDR memory devices of the first set in a  
 25 direction along the first side and the memory devices of the fourth set are spaced apart from the  
 26 memory devices of the third set in a direction along the second side.” Exh. 6 to Google’s  
 27

1 Invalidation Contentions at 13 (Hansen Decl., Exh. G). Given Google’s apparent ability to apply the  
 2 alleged prior art to claim 11, it cannot now complain that the claim is indefinite.

3 **I. “at a time”**

4 This phrase appears in claim 18, which reads “The memory module of claim 15, wherein  
 5 the command signal is transmitted to two ranks of the first number of ranks at a time.” The ‘912  
 6 Patent at 34:63-65 (Hansen Decl., Exh. A). Netlist contends that “at a time” is a well-understood  
 7 phrase that requires no construction. In contrast, Google seeks to restrict the phrase’s well-  
 8 understood meaning by construing it to mean “at *the same* time.” Exh. B to Joint CC Stmt at 21  
 9 (Dkt. 45).

10 Nowhere does the ‘912 Patent state explicitly or implicitly that “at a time” means “at the  
 11 same time.” An embodiment of claim 18 is illustrated in Table I (State 6) which indicates that for  
 12 certain commands, two ranks are activated and respond to the command:

13 TABLE I-continued

State	CS <sub>0</sub>	CS <sub>1</sub>	A <sub>n+1</sub>	Command	CS <sub>0A</sub>	CS <sub>0B</sub>	CS <sub>1A</sub>	CS <sub>1B</sub>
5	1	0	1	Active	1	1	1	0
6	1	0	x	Active	1	1	0	0
7	1	1	x	x	1	1	1	1

14 State 6 is described as follows: “In Logic State 6: CS<sub>1</sub> is active low, A<sub>n+1</sub> is Don’t Care,  
 15 and Command is active, CS<sub>1A</sub> and CS<sub>1B</sub> are pulled low, *thereby selecting Ranks 2 and 3.*” The  
 16 ‘912 Patent at 8:37-39 (Hansen Decl., Exh. A) (emphasis added). This example indicates that for  
 17 one given input signal state (e.g., State 6), two ranks are selected. As a result, the command  
 18 signal is transmitted to “two ranks of the first number of ranks at a time.” The phrase “at a time”  
 19 refers to the fact that during a particular time period, there is a given input signal state that results  
 20 in the selection of two ranks. It does not indicate that the command signal is transmitted to both  
 21 ranks “at the same time” as Google apparently contends.

22 Google’s construction also runs afoul of the doctrine of claim differentiation. “Other  
 23 claims of the patent in question, both asserted and unasserted, can also be valuable sources of  
 24

1 enlightenment as to the meaning of a claim term.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314  
2 (Fed. Cir. 2005). “[T]he presence of a dependent claim that adds a particular limitation gives rise  
3 to a presumption that the limitation in question is not present in the independent claim.” *Id.* at  
4 1314-1315 (citations omitted). Claim 20 depends from claim 18 and recites that “the command  
5 signal is transmitted to the two ranks of the first number of ranks concurrently.” The ‘912 Patent  
6 at 35:1-3 (Hansen Decl., Exh. A) (emphasis added). Google’s construction of “at a time” as  
7 meaning “at the same time” would render “concurrently” in claim 20 superfluous. By definition,  
8 if a command signal is transmitted to two ranks concurrently it is transmitted to them “at the same  
9 time.” *See Accumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (refusing to  
10 construe “curved” to mean “nonangular continuous bend” because “such a restrictive reading  
11 would render claims 1 and 13 identical in scope”). Accordingly, the Court should reject Google’s  
12 construction and decline to construe “at a time.”

13  
14 **CONCLUSION**

15 For the reasons provided above, the Court should adopt Netlist’s claim constructions in  
16 their entirety.

17  
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**LEE TRAN & LIANG APLC**

19  
20 By /s/ Steven R. Hansen

21 Steven R. Hansen  
22 Attorneys for Plaintiff  
23 NETLIST, INC.