NONCONFIDENTIAL
Nos. 15-1470, -1554, -1556

IN THE
United States Court of Appeals for the Federal Circuit

MENTOR GRAPHICS CORPORATION, an Oregon corporation,
Plaintiff-Cross-Appellant,

v.

EVE-USA, INC., a Delaware corporation,
SYNOPSYS EMULATION AND VERIFICATION, S.A.S.,
formed under the laws of France,
SYNOPSYS, INC., a Delaware corporation,
Defendants-Appellants.

On Appeal from the U.S. District Court for the District of Oregon, Case Nos. 3:10-cv-00954-MO (Lead), 3:12-cv-01500-MO, 3:13-cv-00579-MO, Hon. Michael W. Mosman

RESPONSE AND REPLY BRIEF OF DEFENDANTS-APPELLANTS EVE-USA, INC., SYNOPSYS EMULATION AND VERIFICATION, S.A.S., AND SYNOPSYS, INC.

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CERTIFICATE OF INTEREST

Counsel for Appellants Synopsys, Inc., Synopsys Emulation and Verification S.A.S, and EVE-USA, Inc. certifies the following:

1. The full names of every party or amicus represented by me are Synopsys, Inc., EVE-USA, Inc., and Synopsys Emulation and Verification S.A.S.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me: N/A.

3. All parent corporations and any publicly held companies that own 10% or more of the stock of the parties represented by me are:

(a) Synopsys, Inc. has no parent corporation.

(b) EVE-USA, Inc. is a wholly owned subsidiary of Synopsys, Inc., a publicly held corporation.

(c) Synopsys Emulation and Verification S.A.S. is owned by Synopsys Global Licensing and Distribution Limited Liability Company. Synopsys Global Licensing and Distribution Limited Liability Company is owned by Synopsys Ireland Limited. Synopsys Ireland Limited is owned by Synopsys, Inc., a publicly held corporation. No publicly held corporation

directly owns 10% or more of Synopsys Emulation and Verification S.A.S.'s stock.

4. The names of all law firms and the partners or associates that appeared for parties or amicus now represented by me in the trial court or are expected to appear in this Court are:

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TABLE OF CONTENTS

Page

CERTIFICATE OF INTEREST i
TABLE OF AUTHORITIES vii
TABLE OF ABBREVIATIONS AND GLOSSARY xii
STATEMENT OF RELATED CASES xiii
SYNOPSYS' APPEAL 1
I. The District Court Erred In Holding Mentor's '376 Patent Infringed 1
A. The claims require pointing out specific code statements that executed or were active. 3
1. Mentor has not rebutted the sources confirming Synopsys' view of the ordinary meaning. 3
2. Synopsys advocates the ordinary meaning, not a new construction with additional limitations. 7
B. The accused probes do not "indicate" or "identify" a specific line of source code that executed or was active. 9
II. The Damages Award Must Be Vacated Because Mentor Did Not Apportion Its Claimed Lost Profits. 13
A. Apportionment is required for lost profits 14
B. Mentor's policy arguments for a lost-profits exception are erroneous and cannot change the legal analysis 17
C. *Rite-Hite* confirms that lost profits must be apportioned absent EMVR. 21
D. Because Mentor has waived any reliance on EMVR, the damages award must be vacated. 26

III. The District Court Erred In Holding Synopsys' '109 Patent Indefinite. 27

IV. The District Court Erroneously Invalidated Synopsys' '526 Patent As Patent-Ineligible..... 34

CROSS APPEAL

STATEMENT OF ISSUES..... 38

SUMMARY OF ARGUMENT 39

ARGUMENT 42

I. The District Court Properly Concluded That Mentor's Willfulness Claim Failed As A Matter Of Law..... 42

A. Mentor cannot seek willfulness damages because it decided not to seek a preliminary injunction. 43

B. Numerous other bases preclude Mentor from proving any infringement was objectively willful. 46

II. The District Court Correctly Invalidated The '882 Patent For Lack Of Written Description..... 47

A. The '882 patent describes one way to increase emulator capacity and claims another. 48

1. The prior art increases emulator capacity through time-multiplexing..... 48

2. The '882 patent's specification teaches using routing clock signals that are faster than the user clock signals. 51

3. The claims require entirely independent clocking signals that lack a minimum-frequency relationship. 54

B. The '882 patent's claims for "independent" clocking are invalid for lack of written description. 55

III. The District Court Correctly Precluded Mentor From Again Asserting Infringement Of The '176 And '531 Patents. 60

A. Res judicata bars successive infringement suits when the accused products are "essentially the same." 61

B. The *Kessler* doctrine bars Mentor's infringement claims. 69

CONCLUSION 72

CERTIFICATE OF SERVICE

CERTIFICATE OF COMPLIANCE

Material has been redacted from pages 32-34 of the Nonconfidential Response and Reply Brief of Defendants-Appellants EVE-USA, Inc., Synopsys Emulation and Verification, S.A.S., and Synopsys, Inc. This material has been designated pursuant to the Protective Order entered in *Mentor Graphics Corporation v. EVE-USA, Inc.*, Case Nos. 3:10-cv-954, 3:12-cv-1500, 3:13-cv-579 (D. Or.). The redacted material is Mentor's proprietary technical information contained in infringement contentions filed below that Mentor has requested remain confidential under the protective order.

TABLE OF AUTHORITIES

Page(s)

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AbbVie Deutschland GmbH v. Janssen Biotech, Inc.,
759 F.3d 1285 (Fed. Cir. 2014) 55

Acumed LLC v. Stryker Corp.,
525 F.3d 1319 (Fed. Cir. 2008) 62, 63

Adaptix, Inc. v. Amazon.com, Inc.,
No. 5:14-cv-01379-PSG, 2015 WL 4999944
(N.D. Cal. Aug. 21, 2015) 65

Ariad Pharm., Inc. v. Eli Lilly & Co.,
598 F.3d 1336 (Fed. Cir. 2010) 40, 55, 59

Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.,
672 F.3d 1335 (Fed. Cir. 2012) 65

Atl. Thermoplastics Co. v. Faytex Corp.,
970 F.2d 834 (Fed. Cir. 1992) 37

Biosig Instruments, Inc. v. Nautilus, Inc.,
783 F.3d 1374 (Fed. Cir. 2015) 30

Blake v. Robertson,
94 U.S. 728 (1876) 16

In re Bookstaff,
606 F. App'x 996 (Fed. Cir. 2015) 3

Bott v. Four Star Corp.,
807 F.2d 1567 (Fed. Cir. 1986) 44, 45

Brain Life v. Elekta Inc.,
746 F.3d 1045 (Fed. Cir. 2014) 65, 70, 71

Commonwealth Sci. & Indus. Research Org. v. Cisco Sys, Inc.,
No. 2015-1066, __ F.3d __, 2015 WL 7783669
(Fed. Cir. Dec. 3, 2015) 14, 17, 19, 25

Datamize, LLC v. Plumtree Software, Inc.,
417 F.3d 1342 (Fed. Cir. 2005) 30

DDR Holdings, LLC v. Hotels.com, L.P.,
773 F.3d 1245 (Fed. Cir. 2014) 32, 35

Deere & Co. v. Bush Hog, LLC,
703 F.3d 1349 (Fed. Cir. 2012) 32

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.,
567 F.3d 1314 (Fed. Cir. 2009) 25

Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.,
758 F.3d 1344 (Fed. Cir. 2014) 36

Eibel Process Co. v. Minn. & Ontario Paper Co.,
261 U.S. 45 (1923) 32

Enzo Biochem, Inc. v. Applera Corp.,
599 F.3d 1325 (Fed. Cir. 2010) 32

Ericsson, Inc. v. D-Link Sys., Inc.,
773 F.3d 1201 (Fed. Cir. 2014) 19

Exergen Corp. v. Wal-Mart Stores, Inc.,
575 F.3d 1312 (Fed. Cir. 2009) 3, 4, 8, 13

Ferguson Beauregard/Logic Controls, Div. of Dover Res., Inc. v. Mega Sys., LLC, 350 F.3d 1327 (Fed. Cir. 2003) 17, 21

Fiers v. Revel,
984 F.2d 1164 (Fed. Cir. 1993) 59

Foster v. Hallco Mfg. Co.,
947 F.2d 469 (Fed. Cir. 1991) 41, 61, 62, 63, 64, 69, 71

Garretson v. Clark,
10 F. Cas. 40 (C.C.N.D.N.Y. 1878) 16

Garretson v. Clark,
111 U.S. 120 (1884) 14, 16, 17

Hallco Mfg. Co. v. Foster,
256 F.3d 1290 (Fed. Cir. 2001) 62, 64, 67, 68, 69

ICU Med., Inc. v. Alaris Med. Sys., Inc.,
558 F.3d 1368 (Fed. Cir. 2009) 55

Interval Licensing LLC v. AOL, Inc.,
766 F.3d 1364 (Fed. Cir. 2014) 30

Inv. Tech. Grp., Inc., v. Liquidnet Holdings, Inc.,
759 F. Supp. 2d 387 (S.D.N.Y. 2010) 43

Kessler v. Eldred,
206 U.S. 285 (1907) 41, 70, 71

Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.,
761 F.2d 649 (Fed. Cir. 1985) 25

LaserDynamics, Inc. v. Quanta Comput., Inc.,
694 F.3d 51 (Fed. Cir. 2012) 18, 20

Lawlor v. Nat'l Screen Serv. Corp.,
349 U.S. 322 (1955) 68, 69

LizardTech, Inc. v. Earth Res. Mapping,
424 F.3d 1336 (Fed. Cir. 2005) 56, 59

Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings,
370 F.3d 1354 (Fed. Cir. 2004) 44, 45

MGA, Inc. v. Gen. Motors Corp.,
827 F.2d 729 (Fed. Cir. 1987) 71

Mowry v. Whitney,
81 U.S. (14 Wall.) 620 (1871) 32

Mpoyo v. Litton Electro-Optical Sys.,
430 F.3d 985 (9th Cir. 2005) 62

Nautilus, Inc. v. Biosig Instruments, Inc.,
134 S. Ct. 2120 (2014) 27, 31

Newell Cos. v. Kenney Mfg. Co.,
864 F.2d 757 (Fed. Cir. 1988) 65

In re Nuijten,
500 F.3d 1346 (Fed. Cir. 2007) 36, 37

Pactiv Corp. v. Dow Chem. Co.,
449 F.3d 1227 (Fed. Cir. 2006) 67, 68

Paper Converting Mach. v. Magna-Graphics Corp.,
745 F.2d 11 (Fed. Cir. 1984) 25

Power-One, Inc. v. Artesyn Techs., Inc.,
599 F.3d 1343 (Fed. Cir. 2010) 29, 30

Presidio Components v. Am. Tech. Ceramics Corp.,
702 F.3d 1351 (Fed. Cir. 2012) 21

Rite-Hite Corp. v. Kelley Co.,
56 F.3d 1538 (Fed. Cir. 1995) 21, 22, 23, 24

In re Seagate Tech., LLC,
497 F.3d 1360 (Fed. Cir. 2007) 38, 39, 42, 43, 44, 46, 47

Seymour v. McCormick,
57 U.S. (16 How.) 480 (1853) 15

SiRF Tech., Inc. v. ITC,
601 F.3d 1319 (Fed. Cir. 2010) 35

SmithKline Beecham Corp. v. Apotex Corp.,
439 F.3d 1312 (Fed. Cir. 2006) 65

Speedtrack, Inc. v. Office Depot, Inc.,
791 F.3d 1317 (Fed. Cir. 2015), *cert. denied*,
No. 15-461 (Jan. 11, 2016) 69

Spine Sols., Inc. v. Medtronic Sofamor Danek USA, Inc.,
620 F.3d 1305 (Fed. Cir. 2010) 46

State Indus., Inc. v. Mor-Flo Indus. Inc.,
883 F.2d 1573 (Fed. Cir. 1989) 24

Synthes USA, LLC v. Spinal Kinetics, Inc.,
734 F.3d 1332 (Fed. Cir. 2013) 56

Tate Access Floors, Inc. v. Interface Architectural Res., Inc.,
279 F.3d 1357 (Fed. Cir. 2002) 36

Tate Access Floors, Inc. v. Maxcess Techs., Inc.,
222 F.3d 958 (Fed. Cir. 2000) 21

Teva Pharms. USA, Inc. v. Sandoz, Inc.,
135 S. Ct. 831 (2015) 34

Teva Pharms. USA, Inc. v. Sandoz, Inc.,
789 F.3d 1335 (Fed. Cir. 2015) 34

United States v. Tarallo,
380 F.3d 1174 (9th Cir. 2004) 26

Yale Lock Mfg. Co. v. Sargent,
117 U.S. 536 (1886) 16

Young v. Lumenis, Inc.,
492 F.3d 1336 (Fed. Cir. 2007) 30, 31

Federal Statutes and Rules

35 U.S.C. § 112(a) 40, 55

35 U.S.C. § 284 19

Fed. Cir. R. 47.5 xiii

TABLE OF ABBREVIATIONS AND GLOSSARY

'376 patent	U.S. Patent No. 6,240,376, assigned to Mentor Graphics
'109 patent or "Gregory"	U.S. Patent No. 6,132,109, assigned to Synopsys, Inc.
'526 patent	U.S. Patent No. 7,069,526, assigned to Synopsys, Inc.
'882 patent	U.S. Patent No. 6,947,882, assigned to Mentor Graphics
'176 patent	U.S. Patent No. 5,649,176, assigned to Mentor Graphics
'531 patent	U.S. Patent No. 6,009,531, assigned to Mentor Graphics
APA	Administrative Procedure Act, 5 U.S.C. §§ 701-706
Board	Patent Trial and Appeal Board
EMVR	Entire Market Value Rule
EVE	EVE-USA, Inc. and Emulation and Verification S.A. (now named Synopsys Emulation and Verification S.A.S.)
FPGA	Field-Programmable Gate Array
Mentor	Cross-Appellant Mentor Graphics Corporation
PTO	United States Patent & Trademark Office
RTL	Register Transfer Level
Synopsys	Collectively, Appellants Synopsys, Inc., EVE-USA, Inc., and Synopsys Emulation and Verification S.A.S.

STATEMENT OF RELATED CASES

Our original Statement of Related Cases identified several matters that are pending. OB xiii-xv.* Synopsys submits the following to supplement that Statement. *See* Fed. Cir. R. 47.5.

Our Statement of Related Cases identified the *inter partes* review of Mentor's '376 patent. *Synopsys, Inc. v. Mentor Graphics Corp.*, IPR2012-00042 (Patent Trial and Appeal Board). Since Synopsys filed its opening brief in this appeal, this Court heard oral argument on November 3, 2015, in the parties' appeals from the *inter partes* review. *Synopsys, Inc. v. Mentor Graphics Corp.*, Nos. 2014-1516, -1530 (Fed. Cir.).

Our Statement of Related Cases also identified an APA suit brought by Synopsys in the Eastern District of Virginia, which challenged the Board's policy and practice of issuing final written decisions that address the patentability of only certain challenged claims. *Synopsys, Inc. v. Lee*, No. 1:14-cv-00674-JCC-IDD (E.D. Va.). On November 3, 2015, this Court also heard oral argument in Synopsys' appeal of the dismissal of its APA suit. *Synopsys, Inc. v. Lee*, No. 2015-1183 (Fed. Cir.).

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* We refer to Synopsys' opening brief as "OB"; Mentor's principal and response brief as "MB"; and the amicus brief of Hewlett-Packard Company, et al., as "HP Br."

SYNOPSYS' APPEAL

I. The District Court Erred In Holding Mentor's '376 Patent Infringed.

Everyone agrees on the basic principles that govern the non-infringement question. Mentor does not dispute that the object of the sentence in every claim—what must be "identified" or "indicated"—is a specific line or lines of source code. OB27-32. Claims 1 and 28 require an instrumentation signal "indicative of an execution status of at least one [source code] statement." A532-33, cols. 15:2-9, 17:61-18:7. Similarly, claims 24, 26, and 27 require "identifying" in the source code a function—referred to as "a process"—and then "identifying the process as active." A533, col. 17:37-60. All agree that these claims rise and fall together, as Mentor's expert testified. OB31-32 (quoting A42,422); MB15-19, 22-23 (applying the same analysis to both claims). And everyone agrees that this Court must "review … the verdict … us[ing] the ordinary meaning of 'indicative' and 'identifying.'" MB19-20 (citation omitted); *accord* OB32-34. So the question is: What is that ordinary meaning? That is where we disagree—or maybe not.

Our position on the ordinary meaning is clear: "When you say something 'indicates' or 'identifies' certain information [here, particular lines of

source code], the ordinary meaning is that the device specifies or points to *that very information*. You don't 'indicate' information by providing *other* data that might help you indirectly figure out the needed information." OB32.

Discerning what Mentor considers the ordinary meaning is like trying to catch an eel with chopsticks. Sometimes, Mentor embraces our view that "[t]he terms 'indicative' and 'identifying' … require … that the signals 'point out' and 'make known' the execution status of the RTL source code statements being debugged," MB23—i.e., the specific source code lines. Mentor concedes that to "identify" means "'to link in an inseparable fashion,'" MB26, to specify the line of code with "'exactness'" and "'certainty,'" MB22. On this basis, we must prevail, because Synopsys' emulators do no such thing. § I.B.

But at other points—often in the same breath—Mentor insists it suffices "to point … *toward*" the line of code, to "'*serve as a means* of identification' of whether a process is active," even merely to "hint[] or suggest[]" the needed information, or "to be a sign, symptom, or index of" that information. MB22-23 (emphasis added). This is incorrect. As we explain (and as Mentor sometimes agrees), the ordinary meaning of "indicate" and

"identify" is to specify the very information in question. The claims therefore require pointing out the specific code statements that executed or were active. § I.A. The undisputed evidence is that the accused devices do not do that. § I.B.

A. The claims require pointing out specific code statements that executed or were active.

1. Mentor has not rebutted the sources confirming Synopsys' view of the ordinary meaning.

Caselaw. The resolution of this issue could begin and end with this Court's definitive holdings on the "well-known meaning" of the relevant terms. *In re Bookstaff*, 606 F. App'x 996, 998 (Fed. Cir. 2015). Under "the ordinary meaning of 'indication,'" the information reported "must itself be the value [needed]; it cannot be some other value requiring further (mental) computation before arriving at the [value sought]." *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1321 (Fed. Cir. 2009); *see* OB32-35, 37-39.

Mentor's response distorts *Exergen* beyond recognition. It suggests that *Exergen* turns not on the "ordinary meaning of 'indication'"—as the above-quoted language says—but of "display." MB25. To the contrary, as we explained (OB37-39), *Exergen* reversed a jury's infringement verdict because the thermometer did not "provid[e] an *indication* of the [patient's]

internal temperature"—only the oral temperature. 575 F.3d at 1320 (emphasis added). It did not matter that oral temperature is easily "correlated" to the internal temperature using a basic "clinical lookup table." *Id.* at 1321. The necessity of "further (mental) computation"—simple as it was—meant that displaying oral temperature was not "indicat[ive]" of internal temperature. *Id.* Any other holding would "change the ordinary meaning of 'indication.'" *Id.*

Focused on "display," Mentor responds: "Unlike *Exergen*, none of the claims at issue here require the 'display' of a particular piece of information …." MB25. True, but irrelevant. *Exergen* was not about the meaning of "display." Everyone agreed that the accused thermometers *displayed* oral temperature. The issue was whether "oral temperature, while not itself an internal temperature, is nevertheless an 'indication' of internal temperature." 575 F.3d at 1321.

We are not "rewrit[ing] the claim" to "require the '*display*' of a particular piece of information." MB25 (emphasis added). We have said that "the ordinary meaning [of 'identify' or 'indicate'] is that the device *specifies or points to* that very information, here, the line of code." OB32 (emphasis changed). Our position is agnostic as to whether the device does so by

"displaying" the specific line, or by linking to it, tagging it, or robotically declaring, "Line 43,895 executed, Dave." The key—and the lesson from *Exergen*—is that the ordinary meaning of "indicate" and "identify" a source code statement is that the device must tell you the source code statement, not *other* information that requires "further (mental) computation" to tell you which line it is.

Mentor also tries to distinguish *Exergen* on the theory that "Mentor's expert … never testified" that he agreed with the meaning articulated in that case. MB25. That is irrelevant. As in *Exergen*, the parties agreed to jury instructions adopting the ordinary meaning of these terms, MB20 (citing A155-56), and an electrical engineer cannot change the ordinary meaning of lay terms like "indicate" and "identify."

The patent. The ordinary meaning of "indicate" and "identify" is precisely how the patent uses those terms. OB34. Mentor responds that Synopsys "distorts the problem the '376 patent was trying to solve" by arguing "that the claim terms 'indicative' and 'identifying' must be read in a way that precludes 'extra work to correlate the test result with the specific line(s) of code.'" MB21 (quoting OB21). But that is exactly what the specification says: A problem with emulation is that it "can be difficult, if

not impossible" to "map[] signal values to *particular source code lines*" so that a bug can be found and fixed. A525, col. 2:7-9 (emphasis added). The patent solves this problem by identifying the code that executed, so the user doesn't have to figure it out himself. OB27-31.

This is evident in the patent's examples of how execution status is indicated. Whether it be by "highlight[ing]" the active statements on screen, having them "displayed using blinking characters," or "reposition[ing]" the source code on screen "so as to indicate the execution paths that are active," the patent claims technology that points out specifically which line of code executed and was active. *See, e.g.*, A525-31, cols. 2:64-65, 6:52-54, 14:19-20.

Bottom line: Mentor has not pointed to anything in the specification suggesting that the patent uses "indicate" and "identify" in any way that departs from the ordinary meaning this Court has ascribed to those words. And if it had, it would not matter, because, as Mentor itself keeps emphasizing (MB19-20, 22-23), *both parties* agreed to adopt the ordinary meaning.

Mentor's prosecution statements. We detailed (OB39-41) how Mentor confirmed the ordinary meaning of "indicate" and "identify" in its

statements to the PTO. Mentor excuses its disavowals as insufficiently "unequivocal[] and unambiguous[]." MB26 (quotation marks omitted). Not so: They were unambiguous. *See* OB39-41. But it does not matter because we are not arguing "disclaimer" (i.e., that Mentor disclaimed claim scope otherwise covered by the claim language). Rather, Mentor's statements to the PTO further confirm the ordinary meaning of the claim terms.

Mentor now points to other arguments it made about the '109 patent. MB27-28. Those additional arguments do not erase Mentor's own usage nor modify the claim terms' ordinary meaning.

2. Synopsys advocates the ordinary meaning, not a new construction with additional limitations.

The central premise of Mentor's argument is that Synopsys impermissibly advocates "a new and more detailed interpretation of the claim language." MB19-20 (quotation marks omitted). That is incorrect. We ask this Court to do exactly what it did in *Exergen*: Evaluate the evidence in light of the claims' ordinary meaning.

In an effort to portray our argument as seeking additional limitations, Mentor asserts that we are trying to insert the words "automatically" and "directly" into the claims. Mentor incorporates that premise into

four point headings (§§ I.B, I.B.1, I.B.2, I.B.3). But Mentor's premise is wrong, so most of its argument is off point. To repeat our view (and this Court's) of the ordinary meaning: When something "indicates" or "identifies" certain information (here, a specific line of source code), the ordinary meaning is that the device specifies *that very information*. OB32. There is no need to import "directly" or "automatically" into the claim.

To create the impression that we are adding limitations, Mentor plucks a few stray words from our brief that describe how the ordinary meaning typically works, and substitutes those words for our statement of ordinary meaning. For example, we say, "You don't 'indicate' information by providing other data that might help you *indirectly* figure out the needed information." OB32 (emphasis altered). We stand by that observation. But that does not add a limitation; it faithfully applies the ordinary meaning. It is no different from this Court's observation that oral temperature was not indicative of internal temperature because it does not measure internal temperature directly, but rather, "requir[ed]" "further (mental) computation." *Exergen*, 575 F.3d at 1321.

Mentor merely piles onto the same strawman when it asserts that "Synopsys incorrectly focuses on" "whether the designer must 'perform

extra work to correlate the test results with the specific line(s) of code.'" MB20 (quoting OB21). Mentor points out that claims 1 and 28 merely call for "information in a data file," and argues "[i]t would be illogical to construe the claims to require that information to 'automatically' or 'directly' *do* anything." MB20-21. Since our position does not depend on inserting either word into the claim, Mentor's argument is irrelevant.

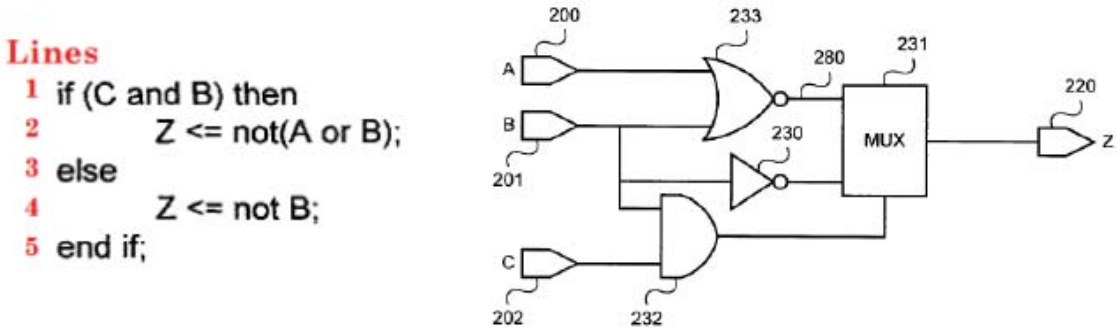
Moreover, our position is exactly what Mentor concedes later in the same paragraph: Even if the claim requires nothing but a "data file," that file must still be "indicative of the execution status of *a statement* in the source code." MB21 (emphasis added). In other words, it must specify a line of source code and tell you whether it executed. Exactly so. *If* a person reviewing the data file needs to "perform extra work" to discern which line of code executed, then it is pretty clear that the data file does not "identify" the line of code that executed.

B. The accused probes do not "indicate" or "identify" a specific line of source code that executed or was active.

There is no dispute about how the accused probes work. They do not point to the source code that executed or was active. Instead, they capture the value of internal probed signals. OB16-19, 36-39. That is not the same thing. Mentor cannot explain away its own expert's testimony that, even

knowing the signal name and value, more work is required. OB36-37 (quoting trial record). He conceded that, to translate from signal values to the line of code, you must work backward to find those signals in the code and plug the values into the logic of the relevant code. *Id.* That was why he was unable to say which lines executed when presented with nothing but the values in the waveform viewer. *Id.* (quoting and discussing A41,182-85).

Our opening brief discussed this critical point at length (OB15-16), in an example that Mentor does not even address.



This simple example depicts five lines of code. They begin with an "if" condition: If both C and B are 1, then go to line 2; otherwise, go to line 4. Probing signals B and C captures the values of those signals, but it does not tell you whether the "then" branch (line 2) or the "else" branch (line 4) executed. The only way to figure that out is to plug the captured values

into the logic. If the probes showed that the values of B and C were both 1, then the designer could figure out that line 2 executed. If either value was 0, the designer could figure out line 4 executed.

In other words, even in this simple illustration, knowing the signal value might *help you figure out* which line of code executed, *if* you apply it to the circuit logic—but it does not tell you which line of code executed. Mentor does not dispute this—or that the typical circuits are far more complicated and the mental operation therefore substantially more arduous. Indeed, in the real world, the implementations are so much more complex, and require so much work, that the patent describes the effort as "difficult, if not impossible." A525, col. 2:7-9.

Mentor tries to overcome this gap by repeatedly invoking the ZeBu manual for the proposition that "'all the *signals* declared as probes are available with their *RTL names* in the … netlist.'" MB16-17 (quoting A43,212) (emphasis added). In other words, the signals have the same name in the netlist/test results as in the code. So, in the schematic above, if signal B is called Broccoli in the source code (on the left), it will also be called Broccoli in the netlist (on the right), and the waveform viewer will report a value next to the word Broccoli.

So what? Giving the signals matching names still does not tell the engineer which line of source code executed or was active. At most, searching for "Broccoli" in the source code might get the engineer in the right neighborhood (though not necessarily, because "Broccoli" may be used in multiple places in the source code). Nevertheless, the engineer still has to perform the same mental function of translating the results by plugging the signal value into the circuit logic.

Accordingly, when Mentor asserts that "ZeBu emulators thus 'connect signal values' to 'particular source code lines,'" MB18, or "ZeBu's netlist correlates the results of emulation back to the RTL source code," MB17, Mentor does not mean that the test results actually identify which particular line executed. Mentor means, as its expert put it, that Synopsys' probes make some sort of "'association' between the name of the probe and the source code … being probed," MB16 (quoting A42,417)—an association that may allow a talented engineer who understands the source code's logic to figure out which line of source code executed.

The mental process the engineer must apply to get from the information provided (the name of the probe and the signal's values) to the answer needed (which line of source code executed) is far more complex than the

association in *Exergen* between oral and internal temperature. If, as this Court held, that association is not sufficiently close, when all you have to do is run your index finger up a standard clinical table, 575 F.3d at 1321, then the association Mentor posits is not even close.

As in *Exergen*, this Court should reverse.

II. The Damages Award Must Be Vacated Because Mentor Did Not Apportion Its Claimed Lost Profits.

The district court agreed with Synopsys at summary judgment that apportionment is required, but declined to instruct the jury on apportionment, only to conclude that this was error. OB18-20. Yet, the court did not order a new trial because it believed that Mentor had proven an uninstructed legal theory of EMVR that Mentor had disavowed. *Id.* Now, Mentor insists it is entitled to keep the lost-profits award, even though it rejects the district court's rulings at every step. Mentor devotes all of its energy to challenging the critical step that the district court got right—its ruling that Mentor had to apportion damages. Mentor's insistence that it was *not* required to apportion flouts settled law. § II.A. The district court correctly rejected Mentor's policy arguments for a lost-profits exception, § II.B, as well as its insistence that *Rite-Hite* implicitly overruled Supreme Court precedent, § II.C. And, on the sole basis on which the district court

ruled in its favor, Mentor tellingly declines to defend that court's post-hoc EMVR rationale. § II.D.

A. Apportionment is required for lost profits.

"Apportionment is not a new rule." *Commonwealth Sci. & Indus. Research Org. v. Cisco Sys, Inc.*, No. 2015-1066, __ F.3d __, 2015 WL 7783669, at *4 (Fed. Cir. Dec. 3, 2015); *see* OB43-45, 51-53. Yet, Mentor ignores the Supreme Court's age-old pronouncement that "[w]hen a patent is for an improvement," the patentee "must *in every case* give evidence tending to separate or apportion … damages between the patented feature and the unpatented features." *Garretson v. Clark*, 111 U.S. 120, 121 (1884) (emphasis added). Not every case, says Mentor—just every case but this one.

The keystone of Mentor's argument is its assertion that "neither this Court nor the Supreme Court has ever held that patentee is only entitled to a portion of the profits it lost as a result of … infringement." MB40-41. That is false at least five times over—and blatantly so, for the Supreme Court's most definitive pronouncements about apportionment came in lost-profits cases.

Start with *Seymour v. McCormick*, 57 U.S. (16 How.) 480 (1853), which we discussed at length (OB44-45, 47, 50). *Seymour* declared it "a very grave error to instruct a jury 'that as to the measure of damages the same rule is to govern, whether the patent covers an entire machine or an improvement on a machine.'" 57 U.S. at 491. We explained that *Seymour* applied apportionment to a lost-profits claim indistinguishable from this one. OB50.

Mentor offers no response. It just buries *Seymour* in a footnote as one of several cases that it describes as "opinions regarding apportionment of reasonable royalties and disgorged profits," not lost profits. MB38 n.6. On the contrary, *Seymour* involved an award of "profits which in judgment of law [the patentee] *would have made*, provided the defendants had not interfered with his rights," 57 U.S. at 486 (emphasis added), and it described the patentee as seeking "actual damages" (not disgorgement), *id.* at 489.

Mentor makes the same assertion about *Garretson*—the source of the Supreme Court's "every case" command quoted above. Mentor describes *Garretson* as a "case … in which a defendant's disgorged profits, not a plaintiff's lost profits, were apportioned." MB40-41; *see* MB38 n.6.

Wrong again. *Garretson* held that the plaintiff had to "apportion the defendant's profits and *the patentee's damages* between the patented feature and the unpatented features." 111 U.S. at 121 (emphasis added). The Court had to address lost profits because the patentee sought not just "the profits made and received by the defendants," but also "the damages, if any, over and beyond the amount of such gains and profits, suffered by the [patentee], by reason of the infringement." *Garretson v. Clark*, 10 F. Cas. 40, 41 (C.C.N.D.N.Y. 1878).

The truth is that the Supreme Court has regularly applied apportionment to lost profits. In *Yale Lock Manufacturing Co. v. Sargent*, 117 U.S. 536, 553 (1886) (quoted approvingly by MB30-31), the Court explained that the lost-profits award properly deducted the value attributable to features covered by other patents, so that "the damages awarded [were] no greater than the testimony warranted." Similarly, in *Blake v. Robertson*, the Court rejected a patentee's claim for unapportioned lost profits, holding that the patentee was "entitled only to nominal damages" because his machines included "inventions covered by other patents," and "[i]t was not shown how much of the profit was due to those other patents." 94 U.S. 728, 733-34 (1876).

This Court has both quoted and faithfully followed these teachings in stating the categorical rule that apportionment is required "in every case." *Commonwealth*, 2015 WL 7783669, at *4 (quoting *Garretson*, 111 U.S. at 121); *see* OB43-45, 51-53 (discussing cases). Most notable is *Ferguson Beauregard/Logic Controls, Division of Dover Resources, Inc. v. Mega Sys., LLC*, 350 F.3d 1327 (Fed. Cir. 2003) (described at OB51-52). Mentor declares, "Nowhere in *Ferguson-Beauregard* did this Court … suggest that Ferguson was entitled to only a portion of the profits it lost as a result of the defendant's infringement." MB43-44. Nowhere? How about where this Court declared that the patentee was entitled only to profits "that could fairly be allocated to customer demand related to the features embodying the [infringed] patent"? 350 F.3d at 1346. That is the definition of apportionment.

These precedents should end the discussion.

B. Mentor's policy arguments for a lost-profits exception are erroneous and cannot change the legal analysis.

In light of the higher authority Mentor ignores, its protest that the rule is "unjust," MB29, is unavailing. It is also wrong. The reason the Supreme Court has consistently required apportionment for lost profits is

that all the rationales for apportioning other forms of damages—including fairness—apply with equal force to lost profits.

Consider the familiar example of a laptop, in which "a high resolution screen, responsive keyboard, fast wireless network receiver, and extended-life battery are all in a sense important or essential features … ; take away one … and consumers are unlikely to select such a laptop." *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012). Imagine a laptop maker infringes a patent for an extended-life battery. A patentee seeking damages calculated as a reasonable royalty might once have *tried* to argue: "The Patent Act entitles me to 'damages adequate to compensate for the infringement.' You needed that battery. I can prove that 'but for' your infringement, you wouldn't have sold a single laptop. So in a negotiation, I could have made you pay me what you made because of your infringement." Or, back when disgorgement was a measure of damages, the patentee might have started with the same point about "adequate compensation" and *tried* to argue: "I can prove definitively that 'but for' your infringement, you wouldn't have sold a single laptop. So, I am entitled to every penny of your ill-gotten gains." Each would appeal to justice.

As Mentor must acknowledge (MB40), both arguments fail under settled law. Yet, those are almost verbatim Mentor's arguments justifying its demand for every cent of the emulator sales it claims it lost. MB31.

Mentor maintains that lost profits are somehow different, just because a separate rule says that lost profits are never available unless the plaintiff makes a threshold showing of but-for causation. Yet there is no basis in law or logic to treat but-for causation as a substitute for apportionment. Mentor's arguments founder on the key distinction between proof that infringement caused a lost sale and proof that the claimed damages "compensate for the infringement." 35 U.S.C. § 284. "Under § 284, damages awarded for patent infringement 'must reflect the value attributable to the infringing features of the product, and no more.'" *Commonwealth*, 2015 WL 7783669, at *4. "What is taken from the owner of a utility patent (for purposes of assessing damages under § 284) is only the patented technology, and so the value to be measured is only the value of the infringing features of an accused product." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014); *see* OB44-47; HP Br. 5-9.

Accordingly, saying that a particular feature is a but-for cause of a lost sale is only the starting point in calculating the damages. But-for

causation is binary: A particular sale either would or would not have occurred "but for" the infringement. That threshold inquiry determines whether the patentee is entitled to *any* lost-profits damages, but fails to account for the reality that sales of a complex product may be driven by "a plethora of features." HP Br. 10 (quoting *LaserDynamics*, 694 F.3d at 68). In the laptop example above, nearly every component is a but-for cause of most sales.

In the lost-profits context, as everywhere else, to award unapportioned damages on a multi-component product just because the patented feature is important to customers would provide more than full compensation for what was taken: It would "overreach and encompass components not covered by the patent." *LaserDynamics*, 694 F.3d at 70. Regardless of the form of patent damages sought, apportionment is always needed to preserve the link between the damages award and the patent right infringed. Otherwise, the threat of damages grossly exceeding the value of the patented invention would deter innovators from seeking to improve multi-component products. *See* HP Br. 2-3; OB47.

Mentor protests that it cannot "imagine a method by which lost profits could be effectively apportioned," because its emulators do not practice

the '376 patent. MB41. It didn't take any imagination for Mentor's expert to figure out the basic approach when the district court originally required apportionment. OB19. While his execution was otherwise gravely flawed (for reasons not relevant here), he understood that the right approach was what this Court suggested in *Ferguson*: Look to the accused product to assess how much the patented feature drove demand for that product, and apply that proportion to the patentee's product. 350 F.3d at 1346.

C. *Rite-Hite* confirms that lost profits must be apportioned absent EMVR.

Mentor insists that *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995) (en banc) "dictates that lost profits should not be apportioned." MB32 (capitalization altered). In light of the clarity and frequency with which the Supreme Court has held otherwise, the very notion is dubious. And, of course, this Court did not read *Rite-Hite* that way when, in *Ferguson*, it followed the Supreme Court's apportionment rules.[1] In truth, Mentor overreads *Rite-Hite*.

[1] The other cases Mentor cites (MB31) are inapposite because they don't address apportionment or EMVR (*Presidio Components v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1359-62 (Fed. Cir. 2012)) or those defendants did not challenge the awards on those grounds (*Tate Access Floors, Inc. v. Maxcess Techs., Inc.*, 222 F.3d 958, 970-71 (Fed. Cir. 2000)).

As Mentor concedes, *Rite-Hite* involved a different issue—whether patentees may "obtain lost profits … of a product that … did not practice the asserted patent." MB32. *Rite-Hite* was not an apportionment case or even a case involving multi-component devices. OB50. For those reasons alone, *Rite-Hite* is inapposite—and certainly cannot be read to reject the Supreme Court's apportionment rulings.

Thus, for example, when *Rite-Hite* suggested that "the 'intrinsic value of the patent' is subsumed in the 'but for' analysis," 56 F.3d at 1548, it was not talking about apportionment at all. No one argued in *Rite-Hite* that the claimed lost profits must be apportioned. Instead, the defendant there contended that lost profits should be categorically unavailable where the plaintiff's products do not practice the patented invention; otherwise, the defendant maintained, lost profits would no longer "relate to the 'intrinsic value of the patent.'" *Id.* It was only in rejecting that objection that *Rite-Hite* said that a patent's "intrinsic value" would be "subsumed in the 'but for' analysis." But *Rite-Hite* meant only that where "patent infringement had nothing to do with the lost sales, 'but for' causation would not have been proven," *id.*, and so the plaintiff would not be entitled to *any* lost profits. This discussion was not meant to, and did not, overrule the

longstanding requirement that patent damages be apportioned even after but-for causation has been proven.

Contrary to Mentor's assertion, *Rite-Hite* never says that "but-for" causation is "an alternative and wholly separate test for determining lost profits." MB37. *Rite-Hite* neither describes nor treats it that way. *Rite-Hite* says that "[a] showing under *Panduit permits* a court to *reasonably infer* that the lost profits claimed were in fact caused by the infringing sales, thus establishing a patentee's *prima facie case with respect to 'but for' causation*." 56 F.3d at 1545 (emphasis added). That statement is consistent with the structure described above (at 19-20) of a prima facie showing that is just the critical first step toward securing lost profits—a threshold that allows the patentee to proceed to establish just how much of the lost profits it is entitled to recover.

That is why Mentor is wrong to suggest (MB34) that *Panduit*'s second factor, all by itself, achieves the objectives of apportionment. That factor considers whether there are any "acceptable non-infringing substitutes." *Rite-Hite*, 56 F.3d at 1545. Proving that there are no good substitutes for extending battery life might demonstrate the importance of that

feature, but it says nothing of the value of the patented feature relative to the other components that the patentee did not invent.

Equally telling is what *Rite-Hite* did next: After making the threshold determination that but-for causation had been shown, *Rite-Hite* looked to EMVR to calculate the damages amount. *Id.* at 1549-51. If proof of but-for causation were enough to obtain unapportioned damages, there would have been no reason to consider EMVR, because unapportioned damages would already be available. *See* OB51. Mentor tries (MB37) to explain this away by noting that *Rite-Hite*'s EMVR discussion concerned "convoyed sales"—sales of unpatented components sold with the patented product, rather than (as here) contained within the patented apparatus. 56 F.3d at 1549. But Mentor cannot articulate why that matters, and it doesn't. EMVR is a means for "a patentee … to recover damages calculated on sales of a larger machine incorporating that improvement." *Id.* It applies whether the unpatented component is inside the device or next to it.

The distinction Mentor offers cannot explain the numerous other decisions in which this Court proceeded with the same two-step process—first requiring but-for causation and then analyzing EMVR. *See, e.g.*, *State*

Indus., Inc. v. Mor-Flo Indus., Inc., 883 F.2d 1573, 1580 (Fed. Cir. 1989); *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*, 761 F.2d 649, 656 (Fed. Cir. 1985); *Paper Converting Mach. v. Magna-Graphics Corp.*, 745 F.2d 11, 22-23 (Fed. Cir. 1984). Certainly, if this Court had intended to wipe out all these two-step cases and replace them with a rule that EMVR and *Panduit* are alternative routes to the same destination, it would have said so explicitly.

Indeed, the very notion makes no sense. If but-for causation and EMVR were independent doctrinal means for excusing apportionment, there would be no reason for any patentee to try to meet the more stringent EMVR test, which requires proof that the patented feature is *the sole cause* of customer demand for the product, whereas *Panduit* requires only that the feature was *a cause*. Given this Court's repeated admonition that EMVR is a "narrow exception to this general rule [of apportionment] derived from Supreme Court precedent," *Commonwealth*, 2015 WL 7783669, at *6 (quotation marks omitted), it cannot be that the exception silently swallowed the rule decades ago in *Rite-Hite*.[2]

[2] Mentor cites *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1330 (Fed. Cir. 2009), MB34, 37, without addressing our point

D. Because Mentor has waived any reliance on EMVR, the damages award must be vacated.

The district court ultimately came to agree with us—conceding it was "error" to have failed to instruct the jury on apportionment/EMVR even if the jury found but-for causation. A42,600. Once that point is established, the only rational result is to vacate the damages award. But the district court did not order a new trial, instead relying on a legally erroneous post hoc rationale that the jury must have found EMVR, even though Mentor disavowed it and the jury was never instructed on it. OB53-57 (a verdict cannot be upheld based on a legal theory on which "the jury was not instructed" (quoting *United States v. Tarallo*, 380 F.3d 1174, 1184 (9th Cir. 2004))). Mentor wisely declines to defend that sole basis on which the district court denied a new trial. With the district court (as well as this Court and the Supreme Court) agreeing that lost profits must be apportioned—and both sides agreeing that the district court's post hoc EMVR analysis is wrong—the damages award must be vacated.

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that it is irrelevant because it discusses "*limitations* within a single patent claim," which need not be apportioned, rather than apportionment between patented and unpatented features. OB57 n.4.

III. The District Court Erred In Holding Synopsys' '109 Patent Indefinite.

A person of ordinary skill who reads the '109 patent would understand that displaying circuit characteristics "near" the source code means doing so close enough to enable the engineer to connect the code to the test results based on their visual placement on the computer screen. OB58-59, 62-65. The patent's purpose, words, and illustrations leave little doubt. This far surpasses the obligation that a patent "inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

A. Mentor argues the patent is not "meaningfully precise," MB50, because it does not "define 'near,' describe examples of what constitutes 'near,' or … provide any standard for measuring 'near.'" MB48. Mentor skips the portion of the specification that explains that the test results must be displayed "visually near" the code, such that their proximity "relates the analysis results … to the particular part of the HDL specification that generated that circuit portion." A493, col. 7:57-64. Accordingly, Mentor ignores all the "objective boundaries" that the specification places on "near." MB50 (quotation marks omitted). For example, "visual" proximity limits the data to being physically displayed on the same screen at the

same time. A493, col. 7:57-59. The patent also specifies precisely what data is to be displayed—"circuit analysis" and "HDL source specification" —on what can be a crowded screen. *Id.*

Even more illuminating are the illustrations. A467, Fig. 11; A475, Fig. 19. Mentor does not dispute that Figures 11 and 19 show results "near" the source code. MB49. Mentor even describes those figures as examples where "the items are adjacent" to one another. *Id.* True, the patent does not explicitly "use[] the term 'near' when describing [these] figures." MB48. But it conveys the point by explaining: "FIG. 11 shows how timing information could be related back to the HDL" code by "display[ing] [that information] next to the appropriate line." A496, col. 13:20-28.

Mentor tries to overcome these illustrations by pointing to Figure 30, which, it claims, "shows circuit information (3030) and related source code (3020) on almost opposite corners of the screen." MB48. But the specification explains that information (3030) and related source code (3020) in Figure 30 illustrate a *different* way of drawing the necessary correlation between the code and the circuit characteristic. "Cursor window 3030 shows circuit information related to text that is *under the cursor*." A500,

col. 21:2-3 (emphasis added). In other words, the user maneuvers the cursor to select the code for which he would like information.

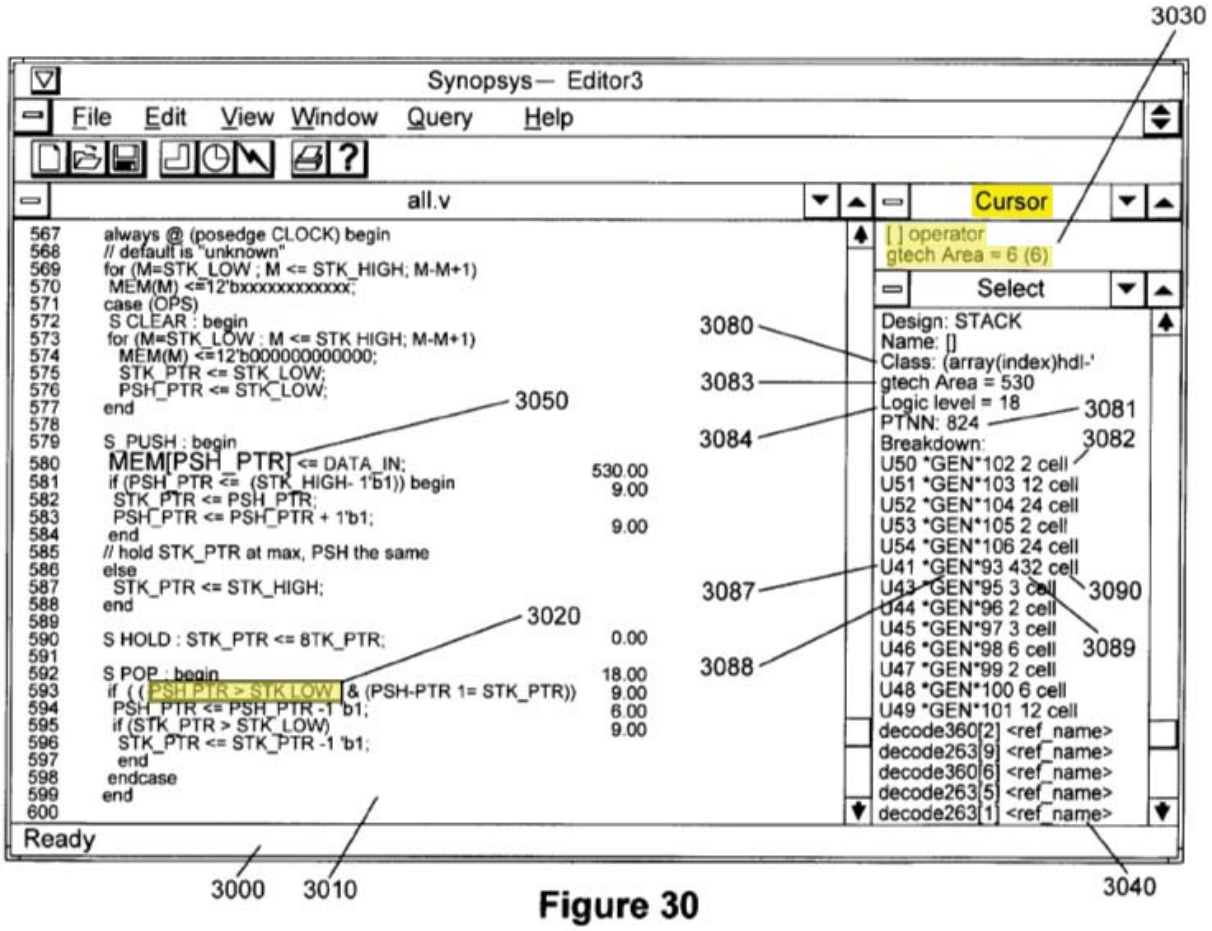


Figure 30

A486 (highlighting added). The portions of Figure 30 that Mentor points to do not depict visual proximity because it is unnecessary. A500, col. 21:15-16.

B. Mentor argues the patent is indefinite because "near" is "subjective." MB50. But this Court has held that "near" is *not* "facially vague or subjective." *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348

(Fed. Cir. 2010) (finding "near" in a claim construction was "meaningfully precise"). "Near" is nothing like the sorts of "subjective" claim terms that Mentor invokes. *See* MB50. No one can say what is "aesthetically pleasing," because beauty is in the eye of the beholder. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005). So, too, is whether something is displayed in an "unobtrusive manner." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1377 (Fed. Cir. 2014). In contrast, "a person of ordinary skill in the field [can] understand the meaning of 'near' … because the environment dictates the necessary preciseness of the term[]." *Power-One*, 599 F.3d at 1348.

That was this Court's rationale for finding "near" definite in *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1345-47 (Fed. Cir. 2007). Because "'near' describes a location on an animal" and relevant characteristics "vary from animal to animal," "near" was an appropriate claim term. *Id.* at 1346. The same is true here, where the sizes of computers' displays, texts, fonts, and viewing windows vary. OB65.

Mentor dismisses *Young* as "[i]napposite," because it was decided before *Nautilus*. MB52. But *Nautilus* "does not render all of the prior Federal Circuit … cases inapplicable." *Biosig Instruments, Inc. v. Nautilus,*

Inc., 783 F.3d 1374, 1381 (Fed. Cir. 2015) (quotation mark omitted). Nor does Mentor contend *Young* would come out differently under *Nautilus*.[3]

Mentor's real objection is that "different engineers would 'make the mental connection' at varying degrees of 'nearness' depending on their experience, visual acuity, familiarity with the software, or [other factors]." MB51. This misunderstands the indefiniteness inquiry. Definiteness is assessed from the perspective of someone "skilled in the art," *Nautilus*, 134 S. Ct. at 2124, which is an electrical or computer engineer familiar "with how [circuit] designs are developed, documented, simulated and synthesized," A14,138-39 (Mentor); A20,505 (Synopsys). There are no "varying degrees" of experience or familiarity.

Similarly, indefiniteness does not turn on whether an engineer is near- or far-sighted or has 20/20 vision—as Mentor's "visual acuity" argument assumes. The hypothetical ordinarily skilled artisan doesn't have such personal attributes. Moreover, the Supreme Court has long rejected the contention that a claim is indefinite just because it leaves some degree

[3] Far from "objective limitations" on "near," MB52, *Young* accepted "near" to mean "approximately," "close to," "very close to," and "at the edge of." *Young*, 492 F.3d at 1346. This is no basis to distinguish *Young* anyway, because the '109 patent, too, has objective limits on "near." *Supra* 27-28.

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of "judgment" to "the operator." *Mowry v. Whitney*, 81 U.S. (14 Wall.) 620, 646 (1871).

Were it otherwise, the Supreme Court never could have upheld as definite a claim requiring a wire to be placed at a "high" or "substantial elevation," *Eibel Process Co. v. Minn. & Ontario Paper Co.*, 261 U.S. 45, 50, 65-66 (1923), and this Court could not have upheld claims using the phrases:

- "look and feel" and "visually perceptible elements," *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1246, 1261 (Fed. Cir. 2014) (post-*Nautilus*);
- "not interfering substantially," *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1335 (Fed. Cir. 2010) (cited approvingly post-*Nautilus* by *DDR Holdings*, 773 F.3d at 1260); and
- "substantially planar" and "easily washed off," *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1359 (Fed. Cir. 2012).

C. Mentor argues that there must be "ambiguity" because Synopsys "switched positions" on whether source code and circuit analysis contained in separate display windows are "near." MB51-52. There was no switch, because the two displays were different. Synopsys' preliminary infringement contentions included [redacted]:

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[redacted]

A14,987. But Mentor omits the accompanying text: "[redacted]." *Id.* (emphasis added). In other words, this [redacted] Rather, [redacted].

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[redacted]. The circuit analysis is located "near" the code because [redacted]. [redacted] and thus are irrelevant to the meaning of "near."

D. In any event, there is a factual dispute that should have precluded summary judgment. OB65-66. Mentor does not dispute that the experts disagreed about whether a skilled artisan would understand the meaning of "near." MB53. Mentor relies on pre-*Teva* decisions regarding the purely legal nature of claim construction, ignoring that claim construction can contain subsidiary factual findings, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015), rendering "determination about how a skilled artisan would understand [the claim term] a question of fact," *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015).

IV. The District Court Erroneously Invalidated Synopsys' '526 Patent As Patent-Ineligible.

In defense of the district court's eight-word decision invalidating the Synopsys '526 patent, Mentor presents the oddest ineligibility argument. The claim language itself is fine, so far as Mentor is concerned. Instead, Mentor maintains that the claims are invalid because of two words in the

specification—"carrier waves." That phrase makes one appearance in the specification, as one item in a long list of non-preferred embodiments. To invalidate the claims, Mentor must import into each claim a non-exclusive, non-preferred embodiment, and limit the entire invention to that example. Mentor cites no authority supporting this Draconian result. OB69.

Mentor's argument is built around the premise that the patent claims nothing more than a "machine-readable medium." MB56. But it ignores the specialized hardware the claims require. The claims are tied to execution on a "data processing system" and debugging on "an electronic system having instrumentation circuitry," which is specialized circuitry. A629, col. 55:18-24.

This specialized hardware is comparable to the hardware this Court has found to be patent-eligible. One recent case rejected an eligibility challenge on the ground that the claims tied the intangible methods of calculating and estimating positions to a specialized GPS device. *SiRF Tech., Inc. v. ITC*, 601 F.3d 1319, 1331-32 (Fed. Cir. 2010). In another, the patent's claims for counting customer hits on webpages were "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *DDR Holdings*, 773 F.3d at 1257. As in

each of these cases, Synopsys' invention is not about naked "carrier waves," but specific hardware with specialized circuitry that performs a specific task. There is nothing abstract about it.

That distinguishes Mentor's two cases. The asserted claims are nothing like the "device profile" claims in *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, where the claims were directed to "information in its non-tangible form." 758 F.3d 1344, 1349 (Fed. Cir. 2014) (cited by MB56). Equally inapposite is Mentor's main case, *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007). As previously explained (OB67-70), the claims in *Nuijten* covered nothing but "*a signal* with embedded supplemental data." 500 F.3d at 1351 (emphasis added). Neither case invalidated claims describing specialized hardware—and certainly did not do so by telescoping the claims down to two words in the specification. No case ever has.

Instead, Mentor invokes the MPEP and Patent Office decisions. MB55-56 & n.8. Those are not binding and, in any event, rely on the "broadest reasonable interpretation" standard that is inapplicable in litigation, where claims should be construed to preserve validity. OB69 (citing *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357,

1369 (Fed. Cir. 2002)); *see Atl. Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 846 (Fed. Cir. 1992).

The best illustration of Mentor's counterintuitive approach is its final point: that everything would be fine if only Synopsys had amended the '526 patent's *specification* to say that the signals are "non-transitory." Even without that modifier, the '526 patent is far from the "transient," "fleeting" signal in *Nuijten* that was "devoid of any semblance of permanence." 500 F.3d at 1356. So no such modifier was necessary. More to the point, there is something very troubling about a theory that would invalidate otherwise valid claims because the specification omits a single adjective ("non-transitory") from a single item in a list of numerous non-preferred embodiments.

This Court should reverse.

CROSS APPEAL

STATEMENT OF ISSUES

1. When willfulness is based on alleged infringement occurring after the suit was filed, "[a] patentee … should not be allowed to accrue enhanced damages" if he "does not attempt to stop an accused infringer's activities," i.e., through a preliminary injunction. *In re Seagate Tech., LLC*, 497 F.3d 1360, 1374 (Fed. Cir. 2007) (en banc). Mentor never sought a preliminary injunction even though its willfulness theory relies solely on post-filing conduct. Did the district court correctly conclude that Mentor was not entitled to treble damages?

2. The '882 patent's specification describes an emulator with two different types of clock signals, one of which must be faster than the other. But, the patent claims an emulator in which that signal need not be faster, and can even be slower. Did the district court correctly conclude that the asserted claims are invalid for lack of written description?

3. Final judgment in a prior patent infringement suit precludes the patentee from claiming infringement of the same patents against essentially the same device in a subsequent suit. Mentor's earlier suit alleging infringement of the '176 and '531 patents was dismissed with

prejudice. Is Mentor precluded from again asserting infringement of those patents against essentially the same devices?

SUMMARY OF ARGUMENT

I.A. The district court correctly found that Mentor could not prove objectively reckless infringement of the '376 patent by Synopsys. Faced with the threat of litigation, Synopsys and EVE filed this declaratory-judgment action out of an abundance of caution to clarify their rights going forward, while EVE was still operating under a license. Yet, while any infringement only could have occurred *after* the suit was filed, Mentor did not request a preliminary injunction to stop the alleged infringement and compel early adjudication of the parties' rights. Instead, Mentor sat back and left Synopsys in the disfavored position of risking potential continued infringement or spending heavily on a potentially unnecessary work-around. This Court holds that a defendant should not be put to such a dilemma and, under those circumstances, "[a] patentee … should not be allowed to accrue enhanced damages." *Seagate*, 497 F.3d at 1374.

B. Alternatively, Synopsys' infringement could not be willful in light of its objectively reasonable defenses of non-infringement (discussed

above), invalidity (accepted by the Patent Trial and Appeal Board in invalidating some of Mentor's asserted claims during *inter partes* review), and res judicata (which prevailed below). Mentor never disputes that Synopsys' defenses were at least reasonable, thereby negating any claim of objective recklessness.

II. The district court correctly invalidated claims 7, 9, and 13 of Mentor's '882 patent for lack of written description because the *specification describes* an emulator with two signals where one must be faster than the other, whereas the *claims claim* an emulator with two signals that are completely independent from one another.

"The specification shall contain a written description of the invention," 35 U.S.C. § 112(a), which "ensure[s] that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor's contribution … as described in the patent specification," *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1353-54 (Fed. Cir. 2010) (en banc) (quotation marks omitted). Because the patent *describes* a narrow invention where the signals are not independent because one is faster, but *claims* a broader invention where the signals are independent of each

other, the asserted claims of the '882 patent are invalid for lack of adequate written description.

III. The district court properly precluded Mentor from asserting its '176 and '531 patents here. Under both res judicata and, as an alternative basis, the *Kessler* doctrine, *Kessler v. Eldred*, 206 U.S. 285 (1907), a patentee is barred from asserting infringement of a patent by a device when the same patentee asserted the same patent against essentially the same device in an earlier suit. Under a line of clear precedents, beginning with *Foster v. Hallco Mfg. Co.*, 947 F.2d 469, 479-80 (Fed. Cir. 1991) ("*Foster I*"), this is true regardless of whether the later accused products existed at the time of the earlier suit. Mentor does not dispute that Synopsys must prevail under this line of precedent because the devices accused here are essentially the same as those Mentor accused in 2006. Instead, Mentor's only argument in this Court is that recent panel decisions mean that res judicata applies only to devices in existence during the first suit. But Mentor does not address the district court's primary holding that a panel cannot overrule another, and so the earlier decisions, like *Foster I*, control.

ARGUMENT

I. The District Court Properly Concluded That Mentor's Willfulness Claim Failed As A Matter Of Law.

Before trial, Synopsys moved to preclude evidence of willful infringement of the '376 patent. A26,720-23. The district court granted Synopsys' motion. Noting that EVE's license to the '376 patent did not expire until after Synopsys and EVE filed this declaratory-judgment action to clarify their rights, the court held that Mentor's willfulness claim was premised solely on post-litigation conduct. A40,545-46. Mentor did not attempt during litigation to stop the accused infringement by, for example, seeking a preliminary injunction. Given the facts of this case, the court held that Mentor's claim failed *Seagate*'s objective prong. A40,546-47. Having concluded that Mentor's claim failed, the court did not address Synopsys' alternative argument that its defenses were reasonable. *See* A26,720-23.

This Court need not review the district court's willfulness ruling unless it affirms the judgment of infringement. But if so, it should affirm the willfulness ruling, too. Unless the Supreme Court changes the standard, Mentor must prove by "clear and convincing evidence" that the defendant's infringement was objectively and subjectively "reckless." *Seagate*, 497 F.3d at 1371. Mentor failed to satisfy the objective prong,

both on the basis the court articulated, § I.A, and because Synopsys' defenses were reasonable, § I.B.

A. Mentor cannot seek willfulness damages because it decided not to seek a preliminary injunction.

Willfulness usually depends on "prelitigation conduct." *Seagate*, 497 F.3d at 1374. In that rare situation where willfulness is based on "post-filing conduct[,] … a patentee can move for a preliminary injunction, which generally provides an adequate remedy for combating post-filing willful infringement." *Id.* "A patentee who does *not attempt to stop an accused infringer's activities* in this manner should *not be allowed to accrue enhanced damages* based solely on the infringer's post-filing conduct." *Id.* (emphasis added).

The rationale for this rule is simple: A defendant should not have to "choose between [1] resting on [defenses] it believes to be objectively reasonable and [2] engaging in costly and potentially unnecessary redesign of its accused products," when the patentee can test those defenses early by seeking a preliminary injunction. *Inv. Tech. Grp., Inc., v. Liquidnet Holdings, Inc.*, 759 F. Supp. 2d 387, 411-12 (S.D.N.Y. 2010) (quotation marks omitted). This principle is not a "rigid" rule, MB60, but rather one that considers the equities and is intended to prevent a patentee from being

"allowed to accrue enhanced damages" by sitting on its hands while its potential award grows and the defendant justifiably relies on reasonable defenses. *Seagate*, 497 F.3d at 1374.

This case presents precisely that situation. Months before Synopsys acquired EVE, Mentor threatened Synopsys with litigation. To clarify its rights and ensure that it was not infringing, Synopsys and EVE filed this declaratory-judgment action one week before Synopsys acquired EVE and EVE's license terminated. Filing a prophylactic declaratory-judgment action before any infringement can even be alleged to have occurred is exactly what the law encourages and is the polar opposite of recklessness.

Mentor contends that the relevant "filing" date is not when this suit was filed, but instead when Mentor filed infringement counterclaims. But *Seagate* says nothing about the filing date for *infringement* claims, referring only to "prelitigation" or "post-filing conduct." 497 F.3d at 1374. Mentor's cases do not support its narrow reading of *Seagate*. MB61 (citing *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354 (Fed. Cir. 2004); *Bott v. Four Star Corp.*, 807 F.2d 1567 (Fed. Cir. 1986)). Indeed, both cases predate the en banc *Seagate* decision. *Bott* rests its willfulness holding on the since-overturned rule that a defendant has an

affirmative obligation to obtain an opinion of counsel. *Id.* at 1572. *Metabolite* is doubly irrelevant because that defendant "d[id] not directly challenge the jury's willfulness finding." 370 F.3d at 1370.

Even under Mentor's proposed rule, its appeal would fail. The district court disagreed as a matter of fact that Mentor's allegations were based on prelitigation conduct. The court explained that this was not a race to the courthouse that "would come as a surprise and kind of come out of nowhere." A40,545-47. Mentor threatened Synopsys with litigation if it acquired EVE, A44,471, and Synopsys filed this declaratory-judgment action to clarify—and protect—its rights.

Synopsys should not be punished for clarifying its rights to newly acquired technology, particularly with powerful defenses of res judicata, invalidity, and non-infringement on which Synopsys has prevailed as to four of Mentor's five asserted patents. Nor should Synopsys be punished for engaging in settlement discussions with Mentor before serving its declaratory-judgment complaint. *See* MB64-65. Mentor invokes its motion to transfer this case from California to Oregon as an excuse for failing to seek emergency relief, MB65, but Mentor could have sought a preliminary injunction in either venue, even after the transfer. Having failed to do so,

Mentor cannot contend that Synopsys should face the disfavored dilemma underlying *Seagate*.

Mentor is also incorrect (MB63-64) that the district court considered only Mentor's failure to seek a preliminary injunction. The court correctly considered multiple factors: (1) Synopsys did not race to the courthouse; (2) Mentor had "adequate notice of filing in order to seek an injunction to prevent any post-filing harm"; (3) this was not a case where a patentee moved for but was denied a preliminary injunction; and (4) this was not a case where seeking a preliminary injunction was "futile" because the parties don't compete. A40,545-47. The district court did not feel compelled to apply a per se rule, nor did Synopsys urge one. The court merely applied *Seagate* and found that Mentor could not satisfy the objective prong.

B. Numerous other bases preclude Mentor from proving any infringement was objectively willful.

Under current law, Mentor "must show" that Synopsys "acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." *Seagate*, 497 F.3d at 1371. Mentor cannot meet its burden when, as here, the "accused infringer relie[d] on a reasonable defense." *Spine Sols., Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1319-20 (Fed. Cir. 2010).

As is evident from the rest of this brief, Synopsys had several reasonable defenses, including res judicata, invalidity, and non-infringement. Mentor has not even tried to demonstrate that these defenses were unreasonable, rather than wrong. For the reasons explained above, the infringement defense was at least reasonable, as was Synopsys' res judicata defense, which actually *prevailed* as to two other patents, A14,060-62, and, Synopsys' invalidity defenses, which led the Board to institute *inter partes* review and cancel some of the asserted claims, *see* OB xiii-xiv.

Against this, Mentor wrongly faults the district court for not considering evidence of Synopsys' knowledge of the patent and Synopsys' decision to acquire EVE, and for not taking live testimony to assess witness demeanor. MB58, 60. That evidence is relevant, if at all, only to Synopsys' *subjective intent*, not objective reasonableness. *Seagate*, 497 F.3d at 1371.

This Court should affirm.

II. The District Court Correctly Invalidated The '882 Patent For Lack Of Written Description.

Imagine that Russia announces a new race entailing four laps around a track. Before sending a team, the United States verifies that the race is not rigged for unfair advantage. Russia claims, "Don't be silly. Every runner will run at his own speed, and the speed of your athletes will

be independent of ours." When the U.S. team gets to Moscow, Russia presents the written description of the race, revealing a different rule: "Every runner is independent of every other, *except* that U.S. runners must run slower than the Russians." The U.S. would be justified in protesting: "The written description is different from what was claimed."

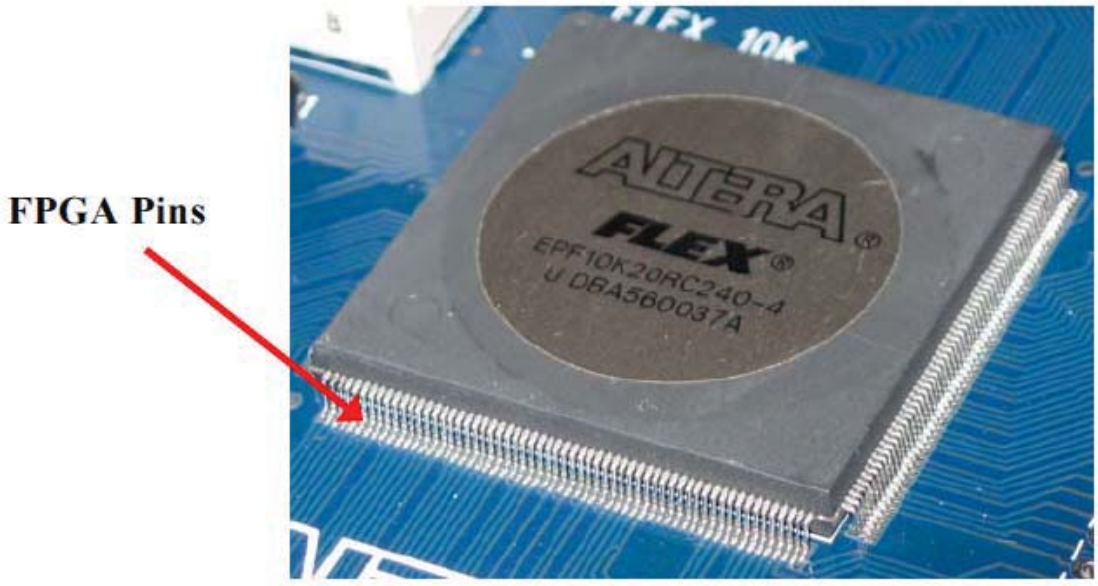
That is what happened here. Claims 7, 9, and 13 of the '882 patent *claim* an emulator in which one signal (the "signal routing clock signal") runs completely "independent[ly]" of another ("the user clock signal"). But the *written description* discloses an emulator where they are not independent, because the latter *must* run slower than the former. § II.A. Because the claimed invention is not disclosed in the specification, the claims are invalid. § II.B.

A. The '882 patent describes one way to increase emulator capacity and claims another.

1. The prior art increases emulator capacity through time-multiplexing.

Our opening brief (OB7-12) described how an emulator loads a circuit design onto an array of customizable chips, known as field-programmable gate arrays ("FPGAs"), so the circuit design can be quickly tested in hardware. Portions of the circuit design are mapped across the multiple

FPGAs. During emulation, signals are transferred between the FPGAs through pins, depicted below:



A6076. Emulation can entail hundreds of FPGAs, OB11, which can be "prohibitively expensive," A565, col. 1:27-32. The '882 patent discloses an improved way for each FPGA to multitask.

As is evident from the picture, the number of pins is limited by the chip's surface area. The number of pins limits the number of signals that can be transferred between FPGAs, which, in turn, limits the size and complexity of the designs that can be emulated. Prior art accommodated this limitation by "time-multiplexing" the signals—essentially, having signals share a pin, with only one input or output traveling through the

pin at any point in time. A565, col. 1:33-49; A17,436. The different points in time are controlled by "clocks" or "clock signals" that alternate rhythmically between 0 and 1.

The "clock edge" is the instant when the clock signal transitions from 0 to 1 or vice versa. A17,437-38. The clock edges usually occur at a constant rate, known as the clock's "frequency." A17,438. The frequency dictates the amount of time between each clock edge; the higher the frequency, the faster the rate of the clock edges. If the frequency of clock edges is 1 billion per second, the clock's cycle of clock edges is 1 billionth of a second (or 1 nanosecond).

Time-multiplexing poses several drawbacks. *First*, because only one of the multiplexed signals can be transmitted during a clock cycle, time-multiplexing slows down emulation. If two signals are multiplexed over one pin, the circuit will operate at only half speed. If four signals are multiplexed over one pin, then only at quarter speed. *Second*, time-multiplexing makes it difficult to preserve the correct circuit behavior in asynchronous operations—i.e., an operation designed to start only after a preceding operation has completed, rather than being synchronized to operate at predetermined or regular intervals. Asynchronous operations

create complications for time-multiplexing because the clock may not be ready for the next signal at the moment when the precursor step happens to have been completed. The '882 patent addresses these disadvantages of conventional time-multiplexing.

2. The '882 patent's specification teaches using routing clock signals that are faster than the user clock signals.

The '882 patent discloses an emulation system with multiple FPGAs (which the patent calls "reconfigurable logic devices"). A565, col. 2:10-22. An exemplary FPGA is illustrated in Figure 2:

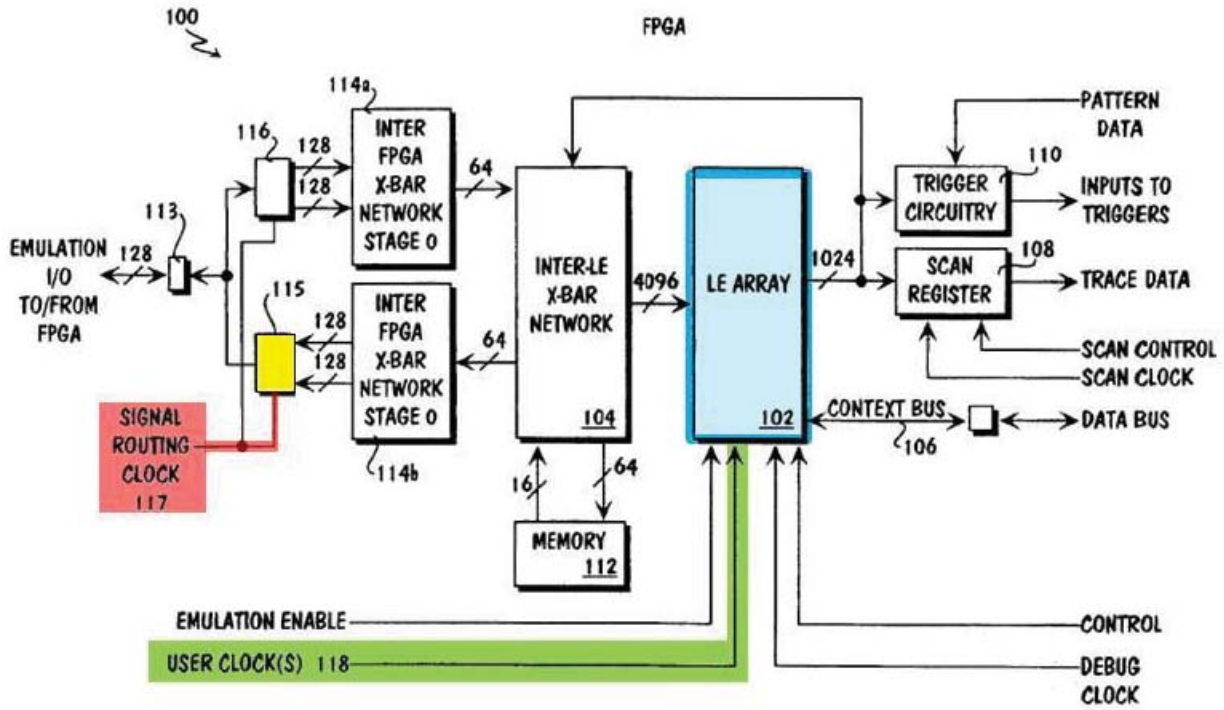


FIG. 2

A555 (color added). A portion of the circuit design being emulated is mapped onto each FPGA's LE array **102** (blue box). This illustration shows output circuitry **115** (yellow box) that receives two signals (both labeled **128**). These represent the two different signals generated simultaneously by the two portions of the design being emulated in that FPGA. The output circuit coordinates the two signals and outputs them using a single pin.

The "user clock[]" **118** (highlighted in green) controls timing of internal signals within the FPGA. A566, col. 4:13-16. A different clock—the "signal routing clock" **117** (highlighted in red)—controls the timing of when signals are routed in and out and between the various FPGAs. A566, col. 4:5-16; *see* A555, Fig. 2.

The specification explains that "signal routing clocks are independent of user clocks," with one big exception: "[e]xcept for … each … signal routing clock having a higher frequency than an associated user clock." A566, col. 4:16-19; *accord* MB5, 67. This "minimum-frequency relationship" *requires* that each signal routing clock must run faster than the user clock. This timing requirement appears throughout the specification and

applies to all disclosed embodiments. *See* A566-67, cols. 4:16-19, 4:24-31, 6:18-20.

The specification explains that this minimum-frequency relationship between the two clocks is crucial in two ways. *First*, unless the routing clock runs faster than the user clock, time-multiplexing will necessarily slow down the emulator. The user clock signals determine the rate at which signals change during operation of the emulated design, whereas the signal routing clock determines the rate at which those signals are routed between FPGAs. To maintain operational speed, a signal routing clock must be faster because only one signal can be sent between FPGAs during any given clock cycle. If not, the result is a digital traffic jam. A16,478-81, 17,443-46. *Second*, a "signal routing clock **117** [that] is of a higher frequency than the 'associated' user clock **118**" is also required to route asynchronous signals generated by an emulated design. A566, col. 4:24-30; *accord* A565, col. 1:50-58 (criticizing prior art's inability to time-multiplex asynchronous signals); *see* A16,478-81, 17,443-46.

For these reasons, the '882 patent explains that "[t]ypically, the frequency of the clock signal(s) in the signal routing time domain is 10 to 100 times greater than the …user time domain." A566, col. 4:32-34.

3. The claims require entirely independent clocking signals that lack a minimum-frequency relationship.

Claims 7, 9, and 13 depend on claim 5, which claims an emulator with at least two FPGAs. The first FPGA receives "a first clock signal," and the second receives "a second clock signal," which are both user clock signals. Each FPGA's input/output circuitry receives "at least one signal routing clock signal," which "is independent of the first clock signal and the second clock signal." A570, col. 12:23-39.

The district court construed "independent" clocking to mean "there is no required timing relationship between clock edges." A10,848. "[N]o required timing relationship" means one clock can be faster than the other, or slower, or the same speed—it doesn't matter. So the claims include no minimum-frequency relationship. Mentor does not challenge the construction on appeal. Accordingly, all agree that the claims cover an emulator where the signal routing clock is *slower* than the user clocks. Nowhere does the specification demonstrate that the inventors conceived of such an invention, much less explain how such an emulator improves multiplexing or achieves its goal of avoiding the digital traffic jam.

B. The '882 patent's claims for "independent" clocking are invalid for lack of written description.

"The specification shall contain a written description of the invention … in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains … to make and use the same …." 35 U.S.C. § 112(a). "[T]he specification must describe an invention … and show that the inventor actually invented the invention claimed." *Ariad Pharm.*, 598 F.3d at 1344, 1351. This "'ensure[s] that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor's contribution to the field of art as described in the patent specification,'" *id.* at 1353-54, and that "a patent applicant, as part of the bargain with the public, [will] describe his or her invention so that the public will know what it is and that he or she has truly made the claimed invention." *AbbVie Deutschland GmbH v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1298 (Fed. Cir. 2014).

Claims that exceed the scope of the specification's disclosure are invalid. Thus, for example, this Court found a lack of written description when the specification described valves with "spikes," but the claims were not so limited. *See ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368,

1378 (Fed. Cir. 2009). It reached the same conclusion where the specification described a method that "maintain[ed] updated sums," but the claims did not include that requirement, *LizardTech, Inc. v. Earth Res. Mapping*, 424 F.3d 1336, 1344, 1346-47 (Fed. Cir. 2005), and where the specification disclosed only "grooves," but the claims covered any type of "opening," *Synthes USA, LLC v. Spinal Kinetics, Inc.*, 734 F.3d 1332, 1342 (Fed. Cir. 2013).

These cases dictate the same result. The '882 patent *claims* an emulator that functions with completely "independent signal routing clock signals." In other words, the claims cover an emulator that somehow improves time-multiplexing even where the signal routing clocks run slower than the user clock. Armed with that overly broad claim, Mentor can block anyone in the future from building and using such a device.

But while the patent claims such a device, the specification does not disclose it. The specification discloses only an emulator where signal routing clocks are *not* completely independent of the user clocks. To the contrary, "each … signal routing clock ha[s] a higher frequency than an associated user clock." A566, col. 4:16-19. Far from demonstrating that the applicants possessed the broader invention, the written description

confirms they did not: The specification explains that signal routing clocks *must be* faster than the user clocks in order to enable the multiplexing and transfer of asynchronous signals. A565-66, cols. 1:50-53, 4:24-31; *see* A17,445. The specification calls this "minimum frequency relationship" between the signal routing clock signal and the user clock signals an "*exception*" to independent clocking. A23,748-49; *accord* A566, col. 4:16-19. Thus, the district court correctly concluded that "the specification does not demonstrate possession of the unqualifiedly independent clocking that the asserted claims require." A23,749.

Mentor tries to escape this logic by arguing that the district court's construction "requires only independence between clock edges, not between clock frequencies" and that the minimum-frequency relationship "does not affect independence because it is not a 'required timing relationship between clock edges.'" MB69-70. That is like the Russians saying, "There is no inconsistency, because we claimed only that the speeds would be independent, but our written description is based on the time for each lap." It's the same thing. By definition, a higher-frequency signal routing clock means that *its edges occur at a faster rate* than the edges of the user

clock. The specification itself draws the relationship between independence and frequency, describing the minimum-frequency relationship as an *exception* to the independence of the disclosed signal routing clocks. *See, e.g.*, A566, col. 4:16-19. Consequently, the asserted claims exceed the scope of the disclosed invention.

Mentor is also wrong (MB69) that the original draft of claim 1 provides sufficient written support for entirely independent signal routing clock signals.[4] Although original claim 1 specified "independent" clocks, it does not demonstrate that Mentor invented anything other than what the specification already describes: signals that are independent but for the huge exception that the signal routing clock must be faster than the user clock. Merely using a word such as "independent" in the original claim language does nothing to show that Mentor invented an emulator in which the signal routing clock ran *slower* than the user clock, particularly when the specification describes an improvement over traditional multiplexing that requires the signal routing clock to be *faster* than the user clock. *See*

[4] Original claim 1 provided "wherein an input/output portion of the first reconfigurable logic device and an input/output portion of the second reconfigurable logic device are clocked by one or more signal routing clock signals which are independent of the first and second clock signals."

LizardTech, 424 F.3d at 1346-47 (original claim did not provide sufficient written description of a claim for all methods of making "seamless DWTs [a type of digital image compression]" where the specification described only one particular method for creating a seamless DWT). This Court has repeatedly rejected the notion that merely reciting words such as "independent" in original claim language is sufficient written description. *See Ariad Pharm.*, 598 F.3d at 1349-51 (rejecting that "original claim language necessarily discloses the subject matter that it claims"); *Fiers v. Revel*, 984 F.2d 1164, 1170 (Fed. Cir. 1993) (rejecting the argument that "similar language" in the "original claims" satisfies the written description requirement). Rather, "[w]hat is claimed by the patent application *must be* the same as what is disclosed *in the specification*." *Ariad Pharm.*, 598 F.3d at 1347 (emphasis added).

Mentor disclosed an emulator where the signal routing clocks are of a higher frequency than the user clocks. Allowing Mentor to claim signal routing clocks of the same or lower frequency permits Mentor to circumvent the purpose of the written-description requirement and exceed the scope of what it invented.

This Court should affirm.

III. The District Court Correctly Precluded Mentor From Again Asserting Infringement Of The '176 And '531 Patents.

In 2006, Mentor sued EVE, alleging that EVE's emulators infringed three patents—including the '176 and '531 patents. A2693-99. The parties settled the suit and agreed that it should be dismissed with prejudice. *See* A2700-01. The district court dismissed the action accordingly. A2704. Neither the settlement agreement nor the dismissal order reserved Mentor's right to sue EVE in the future accusing materially similar devices. *See* A2700-01. EVE took a license to the patents through a separate instrument. A2700-03. That licensing agreement specified that it would "terminate[]" if EVE was acquired by another "company in the [electronic design automation] industry." A2702.

In 2013, Mentor filed counterclaims alleging that seven models of ZeBu emulators infringed its '176 and '531 patents. A1226-27, 3634-35. The district court held (and Mentor does not dispute on appeal) that, in all relevant respects, "the presently and formerly accused ZeBu emulators are 'essentially the same.'" A14,062 (summary-judgment order).

Accordingly, the district court concluded that res judicata attached to the order dismissing Mentor's 2006 lawsuit with prejudice. A14,060-62. Specifically, the district court relied on "two decades" of Federal Circuit

precedent "that judgment on a claim of infringement against a product bars a later infringement claim against a different product if the two products are 'essentially the same.'" A14,061. The court acknowledged that "two recent … panel[s]" had departed from this settled precedent but held that the older precedents must "control[]." *Id.*

The district court's decision was correct, § III.A, though this Court can affirm on the alternative ground—which the district court did not need to reach, A12,989-91—that the *Kessler* doctrine bars Mentor's claims, § III.B. Each doctrine bars a patentee from pursuing infringement claims in a second suit if the accused devices are "essentially the same" as the devices accused of infringing the same patents in an earlier suit that ended in a final judgment.

A. Res judicata bars successive infringement suits when the accused products are "essentially the same."

Res judicata "precludes the relitigation of a claim … which is ended by a judgment of the court." *Foster I*, 947 F.2d at 476. It applies not only where the judgment in the first case "is rendered after trial," but also where, as here, it is "entered upon the consent of the parties." *Id.* Applying res judicata to stipulated dismissals both "embod[ies] the public policy

of putting an end to litigation" and promotes the "strong public interest in settlement of patent litigation." *Id.* at 475-77.

Under Ninth Circuit law, which supplies the standard for the basic elements of res judicata, *Acumed LLC v. Stryker Corp.*, 525 F.3d 1319, 1323 (Fed. Cir. 2008), "[r]es judicata applies when the earlier suit ... (1) involved the same 'claim' or cause of action as the later suit, (2) reached a final judgment on the merits, and (3) involved identical parties or privies," *Mpoyo v. Litton Electro-Optical Sys.*, 430 F.3d 985, 987 (9th Cir. 2005) (quotation marks omitted). Mentor does not dispute that a dismissal with prejudice that results from a settlement is "a final judgment on the merits"; nor does Mentor dispute that its earlier suit involved "identical parties or [their] privies." Accordingly, the only question is whether the two patent suits involve the same claim. This question, unique to patent law, is governed by this Court's precedent. *Hallco Mfg. Co. v. Foster*, 256 F.3d 1290, 1294 (Fed. Cir. 2001) ("*Foster II*").

This Court held 25 years ago that successive patent infringement claims are the same, for res judicata purposes, if the accused products in the later suit are "essentially the same" as those accused in the earlier suit. *Foster I*, 947 F.2d at 479-80. If so, the second suit does "not present a

new cause of action" and is therefore barred. *Id.* at 480. Here, the same patents are asserted as in 2006, and it is undisputed that the "accused ZeBu emulators are 'essentially the same.'" A14,062. Accordingly, under *Foster I*, Mentor's infringement claims are barred.

Mentor makes only one argument for why res judicata cannot apply: because its claims rest "on acts of infringement that occurred" after the dismissal of the 2006 action—i.e., the accused emulators were manufactured after the 2006 stipulated dismissal. MB72-75. As the district court explained, this Court rejected exactly that argument in several long-standing cases, holding that it does not matter whether the accused products were manufactured after the first suit; all that matters is whether "accused devices in each [suit] are 'essentially the same.'" *Acumed*, 525 F.3d at 1326 (quoting *Foster I*, 947 F.2d at 479-80).

In *Foster I*, for example, the parties settled the first suit and, "four years" later, the accused infringer "began producing and marketing new models" of the previously accused device. 947 F.2d at 472. Those products obviously did not exist at the time of the first suit. Nevertheless, this Court held that res judicata would bar the second suit if "the devices in the two suits [were] essentially the same" (and remanded for determination of

whether they were). *Id.* at 479-80. If a "suit involves the same cause of action for patent infringement (claim) … , the issue of [patent] validity (as well as infringement) is barred." *Id.* at 483.

This Court held the same in *Foster II*, an entirely different suit between the same parties. Again, the first suit ended in settlement and dismissal "with prejudice." 256 F.3d at 1293. "After the settlement," the accused infringer "redesigned" the accused products. *Id.* A second litigation ensued, where the patentee argued that it was not barred from asserting infringement in a "subsequent challenge," because "the device in the second action *was*" manufactured later, and therefore was "*not involved in the first action*." *Id.* at 1295 (emphasis added). This Court rejected that position, holding, again, that res judicata bars the second action unless "the underlying cause of action is different from the one brought earlier, which in turn depends on whether the [accused] devices are essentially the same [as those accused in the first suit]." *Id.* at 1297.

Mentor ignores the *Foster* cases on which the district court relied—as if they never existed. Instead, Mentor invokes two more recent panel decisions for the proposition that infringement claims against products that did not exist until "after the prior judgment [a]re not barred." MB73-74

(citing *Brain Life v. Elekta Inc.*, 746 F.3d 1045, 1054 (Fed. Cir. 2014), and *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1342 (Fed. Cir. 2012)). But Mentor says not a word about the district court's rationale for favoring the *Foster* cases: The later cases "cannot be reconciled" with *Foster*. A14,061; *accord Adaptix, Inc. v. Amazon.com, Inc.*, No. 5:14-cv-01379-PSG, 2015 WL 4999944, *7 (N.D. Cal. Aug. 21, 2015) (finding the decisions Mentor cites "inconsisten[t]" with earlier cases). The *Foster* cases were decided years before the panel decisions Mentor cites, and, because one panel cannot overturn another, the earlier decisions control. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 765 (Fed. Cir. 1988).

If Mentor wanted to challenge the district court's critical holding, it had to do so in its principal brief. It didn't, and has thus waived any response. *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1319 (Fed. Cir. 2006). That should be the end of matter.

In any event, the district court was right that the earlier opinions control. They were explicit holdings on the very issue in question. *Aspex*, by contrast (which never mentions the *Foster* cases) dealt with the very different situation of a patentee that *won* a prior infringement suit. And *Brain Life* mentions the *Foster* cases only in passing, in background

unrelated to their controlling holdings—and never explains how its rule could be reconciled with *Foster*.

What's more, the *Foster* cases are correct. Once a patent infringement suit goes to judgment, the patentee should not be allowed to sue the next day, accusing the next batch of the same products just because they hadn't been manufactured before judgment. And the infringer should not be allowed to bring a declaratory-judgment action insisting that the judgment covering yesterday's batch does not apply to tomorrow's. That should obviously be true when the first case was litigated to judgment: A patentee can't bring a new lawsuit the day after a judgment of non-infringement is entered. And the same must be true when the judgment was prompted by a settlement: For res judicata purposes, a judgment is a judgment. *Supra* 61.

Notably, Mentor has not argued otherwise—resting its entire argument on the date of manufacture. MB72, 74-75. But if it does, it should not only justify any distinction under Ninth Circuit law, but should also justify why that would be fair or advance the purposes of finality or the interests of settlement. If parties settle a case by agreeing to a royalty of $1 a unit, the patentee should not be allowed to bring a new infringement

suit, and the accused infringer should not be allowed to bring a new declaratory-judgment suit, as to new units, upon deciding that the price was not right. *See Pactiv Corp. v. Dow Chem. Co.*, 449 F.3d 1227, 1231 (Fed. Cir. 2006) (second suit barred where accused infringer settled the case and took a license, but then stopped paying royalties and filed declaratory-judgment action contesting validity). Certainly Mentor would have objected had EVE accepted the settlement in this matter, and then turned around the next day and sued to invalidate Mentor's patents.

Conversely, the *Foster* rule does not harm patentees who have proven infringement; those patentees already have adequate remedies against future sales of the same products, through injunctions and ongoing royalties. The patentee who negotiates a settlement can always bargain away from the baseline rule—and usually does. Thus, for example, a patentee who dismisses his case in return for a royalty of $1 per unit can negotiate and memorialize an understanding "expressly reserv[ing]" in the settlement "the right to litigate some or all issues that would have otherwise been barred," *Foster II*, 256 F.3d at 1295, if, for example, the defendant stops paying.

If Mentor wanted to override the baseline rule with a similar reservation of rights, it had to do so "expressly." *Id.* Mentor could have insisted that the dismissal order (or, at least, settlement agreement) explicitly state that Mentor had the right to bring a follow-on lawsuit in the event of an acquisition. It failed to do so at all—never mind clearly. With the two *Foster* cases decided in 1991 and 2001, there was no doubt what the law was when Mentor and EVE settled in 2006. The settlement agreement says nothing about future lawsuits—nor does the court's dismissal with prejudice. "[I]n the absence of such an express reservation, consideration of any issue relating to the claim decided in the original action is barred in future litigation between the parties." *Id.*; *accord Pactiv*, 449 F.3d at 1231.[5]

Finally, Mentor's reliance on non-patent cases is unavailing. Mentor treats *Lawlor v. National Screen Service Corp.*, 349 U.S. 322 (1955), as a sea change in res judicata law, MB73, but this Court was aware of and

[5] If res judicata barred a future suit, what was the point of the license? Simple. Under *Foster*, res judicata barred a future suit only as to products that were substantially the same. The license was necessary to grant EVE the authority to practice the patent in any way, including with *entirely new and different products*. Mentor granted EVE that authority, unless and until it was acquired by a competitor.

cited *Lawlor* when it decided both *Foster I*, 947 F.2d at 476, and *Foster II*, 256 F.3d at 1297. Moreover, *Lawlor* is an antitrust case that involved a second suit with genuinely new antitrust violations and new defendants—in res judicata parlance, *different* claims. 349 U.S. at 327. Yet even in that context, where res judicata normally would not apply because of different claims, *Lawlor* says only that res judicata *might not always apply* when two suits involve "essentially the same course of wrongful conduct." *Id.*

Lawlor did not decide when res judicata applies in the absence of the factors present in that case, nor determine how res judicata applies in the patent context, nor set forth any principle that forecloses this Court's "essentially the same" test. This Court's *Foster* decisions do, and mandate that res judicata bars this second infringement suit by Mentor.

B. The *Kessler* doctrine bars Mentor's infringement claims.

This Court can affirm without wading into the thicket of inconsistent panel decisions on res judicata because the *Kessler* doctrine plainly prevents Mentor from repeatedly accusing materially identical ZeBu emulators of infringing the same patents. *See Speedtrack, Inc. v. Office Depot,*

Inc., 791 F.3d 1317, 1323-29 (Fed. Cir. 2015) (resolving under *Kessler* without addressing res judicata), *cert. denied*, No. 15-461 (Jan. 11, 2016). Indeed, *Brain Life*, Mentor's principal res judicata case, is the same case that reaffirmed the *Kessler* doctrine's status as a "separate and distinct doctrine" that "fills the gap" not covered by res judicata. 746 F.3d at 1056.

The *Kessler* doctrine holds that, "[i]f rights between litigants are once established by the final judgment of a court of competent jurisdiction those rights must be recognized in every way." 206 U.S. at 289. Specifically, the earlier judgment conveys upon the accused infringer "the right to sell his wares freely, without hindrance." *Id.* That right extends to products in a later suit that are "essentially the same." *Brain Life*, 746 F.3d at 1057. It is undisputed here that the accused emulators are "essentially the same" as those at issue in 2006. It is also undisputed that Mentor's first suit was dismissed with prejudice pursuant to settlement. Dismissal with prejudice of Mentor's 2006 suit bars its claims against essentially the same technology.

While the *Kessler* doctrine is sometimes described as applying to "adjudicated" infringement claims, *see, e.g.*, *id.* at 1058, this doctrine, like res judicata, applies both where there has been an adjudication of non-

infringement in the earlier suit and where earlier claims were abandoned or dismissed short of adjudication. Indeed, this Court applied *Kessler* to bar method claims that were abandoned—and even dismissed *without prejudice*—in *Brain Life*. *Id.* at 1058; *see also MGA, Inc. v. Gen. Motors Corp.*, 827 F.2d 729, 734-35 (Fed. Cir. 1987) (applying *Kessler* to bar a suit after a state court found in the first suit that the device fell outside of a patent license). This case presents an even more compelling situation than *Brain Life*, as Mentor not only abandoned its claims via settlement, it agreed to dismiss the claims *with prejudice*.

Applying *Kessler* to a negotiated judgment makes perfect sense, just as it does for res judicata. *Supra* 61. *Kessler* is premised on the same finality and certainty concerns as res judicata, not on litigation victories or defeats. 206 U.S. at 288 ("This judgment … settled finally and everywhere … the right to manufacture, use, and sell" the accused devices). Artificially excluding settlement-based final judgments from *Kessler* would run counter to the "strong public interest in settlement of patent litigation." *Foster I*, 947 F.2d at 477. The *Kessler* doctrine applies with full force here.

This Court should affirm.

CONCLUSION

This Court should reverse or vacate the judgment of Synopsys' liability and damages on the '376 patent, vacate the invalidity judgments of Synopsys' '109 and '526 patents, and affirm on Mentor's cross appeal.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on January 11, 2016, I electronically filed the foregoing with the Clerk of Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system.

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B)(i) because this brief contains 13,946 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

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