

DEPARTMENT: MICRO LAW

A Review of *Wisconsin Alumni Research Foundation v. Apple*—Part IV

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This article is the fourth part in a series that reviews the decisions that the district judge and appellate panel made in Wisconsin Alumni Research Foundation v. Apple.

Part I of this series introduced the *Wisconsin Alumni Research Foundation v. Apple* cases and described the asserted patent (U.S. Patent Number 5,781,752). That article also summarized some recent large verdicts for patents asserted by academic institutions and provided several reasons why this series may be of interest to the readership of *IEEE Micro*, most notably because the inventors are well known and several well-known computer architects worked as experts on this case. Part II described the complaints, namely, it described the plaintiff, Wisconsin Alumni Research Foundation (“WARF”), the inventors, and WARF’s allegations as to how Apple’s products infringed WARF’s patent. Part III described Apple’s answer to the allegations in WARF’s complaint, Apple’s counterclaims, and WARF’s response to those counterclaims.

APPLE’S AMENDED ANSWER

On 13 June 2014, 58 days after it filed its original answer, Apple filed an amended answer. The key difference between Apple’s amended answer and Apple’s original answer was that Apple added inequitable conduct as an affirmative defense and a counterclaim. Interestingly, it does not appear that Intel asserted an inequitable conduct defense in the earlier *Wisconsin Alumni Research Foundation v. Intel* lawsuit. Given that the same law firm represented both Intel and Apple and the only evidence relevant to the inequitable conduct claim occurred prior to the issuance of the patent, i.e., before the filing of either lawsuit, it is interesting that Intel did not allege inequitable conduct, while Apple did. One reason for this may be because Intel did not believe that there was

clear and convincing evidence of inequitable conduct, while Apple may have believed that there was. Alternatively, Apple may have been more aggressive in its litigation strategy and thus more willing to assert affirmative defenses or counterclaims that another defendant, i.e., Intel, considered to be weaker or meritless.

Inequitable conduct occurs when a patent applicant “has unfairly obtained an unwarranted patent through misconduct.”¹ Inequitable conduct is a serious allegation. A patent applicant and his/her attorney have a duty of good faith and candor that requires them to disclose information material to patentability. To prove inequitable conduct, a defendant must show by “clear and convincing evidence”—which is an elevated standard as compared to a “preponderance of the evidence,” which only requires more than 50%—that the patent applicant “[1] misrepresented or omitted material information [2] with the specific intent to deceive the [U.S. Patent and Trademark Office (“PTO”).”²

Apple specifically alleged that “’752 patent is unenforceable due to inequitable conduct by at least Andreas Moshovos and Gurindar Sohi, two of the four named inventors of the ‘752 patent” (see Paragraph 22 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Apple does not appear to describe why Dr. Moshovos’s and Dr. Sohi’s conduct was inequitable, and not the other two inventors, but the public version of Apple’s amended answer contains redactions, so that explanation may have been redacted.^a That said, one likely

^aParties in lawsuits often file documents under seal, which are not available to the public, and then later file a public version that contains redactions of the confidential information. Portions of Apple’s amended answer were redacted out, which may be unusual as the prosecution history and prior art is public information. But given that the redactions were fairly minimal, it is possible to read between the lines to determine what Apple’s arguments were.

reason is because Dr. Moshovos was the first named inventor and Dr. Sohi was the faculty advisor for the other three co-inventors, so Apple may have believed that Moshovos and Sohi were more responsible for the claimed invention and the prosecution of the patent application.

Apple asserted that the inventors and their attorney did not disclose some important prior art to the PTO; for example, the patent applicants did not file an “Information Disclosure Statement” with a list of prior art references that were material to patentability (see Paragraph 22 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Apple contends that Dr. Moshovos and Dr. Sohi should have disclosed two pieces of prior art in particular. The first piece of prior art is U.S. Patent Number 5,619,662, and which is titled “Memory Reference Tagging” (see Paragraph 24 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). The inventors of that patent were Simon C. Steely, Jr., David J. Sager, and David B. Fite, Jr., and the patent was originally assigned to Digital Equipment Corporation. This article refers to that patent as the *Steely Patent*. The second piece of prior art is a conference paper written by James E. Smith, which was titled “A Study of Branch Prediction Strategies” and published in *ISCA '81: Proceedings of the 8th Annual International Symposium on Computer Architecture* (see Paragraph 24 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). This article refers to that conference paper as the “*Smith Article*.”

STEELY PATENT

With respect to the first element, misrepresenting or omitting material information, Apple said that “[t]he Steely Patent describes a processor architecture that allows load instructions to speculatively execute ahead of store instructions[,]” by using a “mechanism for predicting when a particular instruction is likely to mis-speculate and, if a mis-speculation is predicted, prevents speculation for that instruction” (see Paragraph 29 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Apple asserts that the Steely Patent is the “same subject matter” as the asserted patent (see Paragraph 29 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Apple contends that the Steely Patent is material to the patentability of “the ‘752 patent because (1) by itself or in combination with other prior art, it invalidates claims of the ‘752 patent, including at least the independent claims, and (2) it is inconsistent with positions taken by the Applicants during the prosecution of the ‘752 patent” (see Paragraph 30 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³).

In addition to failing to disclose the Steely Patent, Apple asserts that “Dr. Moshovos and Dr. Sohi made

affirmative statements about the state of the art that were false in light of the Steely Patent” (see Paragraph 34 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). More specifically, in response to the examiner’s rejection of the pending claims based on U.S. Patent Number 5,555,432 (“Hinton”), Apple argues that

“Applicants responded by arguing that the claims were allowable over Hinton because, among other things, Hinton used ‘a predictor to predict when the results of a previous data producing instruction will be available,’ whereas the predictor in the claimed invention ‘does not determine when data will be available but whether there is data dependence by examining previous instances of mis-speculation.”

(See Paragraph 35 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³)

Apple argued, without explanation, that “Dr. Sohi and Dr. Moshovos were aware that this statement did not distinguish their patent application from the prior art” (see Paragraph 36 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Apple then argued, again without any explanation, that

“Had Dr. Sohi or Dr. Moshovos disclosed the Steely Patent to the Patent Office prior to the issuance of the ‘752 patent, the Examiner would have known that the above-quoted distinction was insufficient to distinguish the claimed invention from the prior art, for the Examiner would have known about prior art—the Steely Patent—that predicts whether there is a data dependence based on historical instances of mis-speculation.”

(See Paragraph 36 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³)

Apple further argued that Applicants were only able to argue that “because the intent of Hinton appears to be to schedule instructions so that there can be no problem with data dependence, it teaches away from [the ‘752 invention’s] prediction technique, which is valuable only when one speculatively executes data dependent instructions out of order” because Dr. Moshovos and Dr. Sohi did not disclose the Steely Patent to the PTO (see Paragraph 37 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³) (emphasis in original). More specifically, Apple argued that the Steely Patent “discloses a predictor that does exactly what Applicants claimed was a point of novelty over the Hinton prior art: Rather than avoiding the problem of data dependence, it seeks to improve the accuracy of

speculatively executing data dependent instructions out of order" (see Paragraph 37 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Based on that, Apple argued that "had the Steely Patent been disclosed to the Patent Office, the Examiner would have known that this distinction also was insufficient to distinguish the claimed invention from the prior art" (see Paragraph 37 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³).

Apple also argued that a statement in the specification of the '752 Patent is "false in light of the Steely Patent" (see Paragraph 38 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). More specifically, Apple pointed to a passage in the specification that recites, "Data speculation circuitry currently does not decide when to do data speculation. Either all memory accesses are speculated or none at all" (see Paragraph 38 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Apple argued that that statement is "false" because, at least according to Apple, the "Steely Patent did not use an "all or nothing" approach when it came to data speculation. Instead, a load in the Steely Patent could speculatively execute depending on whether it had mis-speculated in the past and, in some instances, how many times it mis-speculated in the past" (see Paragraph 38 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³). Based on that, Apple argued that had the "Applicants disclosed the Steely Patent during prosecution of the '752 patent, the Patent Office likely would not have allowed the claims of the '752 patent" (see Paragraph 39 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³).

The Abstract of the Steely Patent describes an out-of-order superscalar processor with register renaming and a branch predictor. The Abstract further recites, "[t]he processor further includes a memory reference tagging store associated with the instruction scheduler so that the scheduler can reorder memory reference instructions without knowing the actual memory location addressed by the memory reference instruction." More specifically, the Steely Patent describes assigning a tag to each static memory instruction. Steely Patent at 2:52–56. If the tags for a store-load pair match, then the processor assumes that the memory references will collide and will prevent them from executing out of order. *Id.* at 2:61–66. But if the tags for a store-load pair do not match, then the processor assumes that the two memory instructions reference different memory locations and allows them to execute out of order. *Id.* at 2:56–61.

The Steely Patent describes that store-load pairs are tagged, e.g., using the last five bits of the memory address, after detecting a collision between the two instructions. *Id.* at 48:24–29. The Steely Patent describes that the program counter and tags for those

instructions are stored in a buffer in the "instruction box," which the Steely Patent describes as "a pipelined instruction box comprised of several elements which fetch and preprocess instructions." *Id.* at 4:45–48. The next time the instruction scheduler encounters this store-load pair, it checks whether the tags match; if so, the instruction scheduler does not reorder those instructions. *Id.* at 48:33–54.

Presumably, when there is not a collision between a store-load pair that has a matching tag, the tags are removed and/or updated to allow for future reordering of that store-load pair.

By contrast, the '752 Patent uses a prediction mechanism based on a history-based counter for each store-load pair. '752 Patent at 11:8–14. The counter increments when the speculation that there is no dependence between a store-load pair is incorrect. *See, e.g., id.* at 12:64–13:3. The counter decrements when the speculation is correct. *See, e.g., id.* at 12:14–17. When the value of the counter is higher than a prediction threshold, the data speculation circuit prevents the load from speculatively executing as it is likely that there is a read-after-write hazard between the load and store. *See, e.g., id.* at 4:21–30. But when the value of the counter is lower than the prediction threshold, the data speculation circuit allows the load to speculatively execute. *Id.*

With respect to the second element, specific intent to deceive the PTO, Apple argued that "Dr. Moshovos and Dr. Sohi acted with the intent to deceive," but the explanation for that is redacted (see Paragraphs 40 and 41 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³).

Based on the aforementioned, there appears to be some similarity between the Steely Patent and the '752 Patent, namely, both patents disclose history-based mechanisms that control whether a subsequent load can speculatively execute before a prior store instruction. But the mechanism in the '752 Patent uses a much more sophisticated approach that is potentially based on significantly more history than the mechanism in the Steely Patent. More specifically, the '752 Patent uses a counter that accumulates several speculation results of that store-load pair and uses a threshold to ensure that a sufficient number of mis-speculations have occurred (i.e., the counter value exceeds a threshold) before the data speculation circuit prevents the load from speculatively executing before the store. '752 Patent, Claim 1, Limitation [b] ("a prediction threshold detector preventing data speculation for instructions having a prediction within a predetermined range.").

On the other hand, to the extent the mechanism in the Steely Patent makes a "prediction," it simply

predicts that what happened last time the store-load pair executed (collision or no collision) will occur again, and prevents the load from speculatively executing before the store or not, respectively. In short, it is questionable whether the mechanism in the Steely Patent makes a prediction, and it certainly does not disclose making a prediction based on a value in a particular range, e.g., use a counter and a threshold. Given these differences, it is questionable, at most, whether the Steely Patent is material to patentability.

IN SHORT, IT IS QUESTIONABLE WHETHER THE MECHANISM IN THE STEELY PATENT MAKES A PREDICTION, AND IT CERTAINLY DOES NOT DISCLOSE MAKING A PREDICTION BASED ON A VALUE IN A PARTICULAR RANGE, E.G., USE A COUNTER AND A THRESHOLD.

SMITH ARTICLE

With respect to the first element, misrepresenting or omitting material information, Apple argued that “[t]he Smith Article discloses a variety of predictors that are used for dynamically predicting the outcome of control instructions. These branch predictors are analogous to load/store predictors, and a predictor used to predict branches could be used to predict data dependences as described in the ‘752 patent.” (See Paragraph 43 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³) Apple contends that the Smith Article is material to the patentability of “the ‘752 patent because ‘in combination with other prior art, it invalidates one or more claims of the ‘752 patent.’ (See Paragraph 44 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³)

Apple contends that Dr. Moshovos and Dr. Sohi knew about the Smith Article and were aware of their obligation to disclose material prior art, but that they nevertheless withheld it from the PTO (see Paragraphs 45, 46, and 47 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³).

Apple alleged that not only did the Applicants fail to disclose the Smith Article to the PTO, but “during prosecution of the ‘752 patent, the Applicants made affirmative statements that were false in light of the Smith Article.” (See Paragraph 48 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³) Namely, Apple alleged that

“Specifically, the ‘752 application described control dependences (i.e., ‘a dependency of instructions after a conditional branch’) and control speculation (i.e., ‘executing an instruction that follows a branch prediction without knowing the outcome of the branch’), but never mentioned any of the branch prediction strategies disclosed in the Smith Article. To the contrary, they told the PTO that ‘[t]ypically all control transfer instructions are speculated.’ But this statement was inconsistent with the Smith Article, which did not merely disclose speculation all the time but rather disclosed a number of prediction strategies that could be used to improve the accuracy of control speculation.”

(See Paragraph 49 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³)

With respect to the second element, specific intent to deceive the PTO, Apple argued that “Dr. Moshovos and Dr. Sohi acted with the intent to deceive,” but the explanation for that is redacted. (See Paragraphs 51 and 52 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*³)

Based on the aforementioned, it appears that Apple’s allegation of inequitable conduct based on the Smith Article appears to be extremely weak for at least two reasons. First, the Smith Article is directed toward branch prediction while the ‘752 Patent is directed toward predicting whether there is a data dependence between two instructions. (It is important to note that although the claims of the ‘752 Patent are written broadly to encompass any pair of instructions with “data dependences,” which could include read-after-write dependences between nonmemory instructions; in reality, the only types of instructions that are actually covered by the ‘752 Patent are loads and stores. In other words, although the relationship between nonmemory instructions is obvious, namely, an earlier instruction writes to a register that is read by a later instruction, loads and stores are the only types of instructions where it is not known, based on the instruction itself, whether there is a relationship between the two instructions.) Not only is predicting whether a branch is taken or not completely different than predicting whether a store-load pair read from and write to the same memory address, predicting memory dependences is significantly harder and more complex than predicting control dependences.

Second, there does not appear to be anything false or inconsistent with the prosecution statements that Apple identifies. Apple argued that

“To the contrary, they told the Patent Office that ‘[t]ypically all control transfer instructions are speculated.’ But this statement was inconsistent with the Smith Article, which did not merely disclose speculation all the time but rather disclosed a number of prediction strategies that could be used to improve the accuracy of control speculation.”

Rather than being inconsistent, the Applicant’s statements seem to be entirely consistent with the Smith Article. More specifically, Applicants argues that “[t]ypically all control transfer instructions are speculated,” which is a factually true statement given that branch prediction was a known and utilized technology. The Smith Article merely describes different types of branch predictors that could be used to perform control speculation.

As such, given the technical differences between control dependences and memory dependences, the Smith Article does not appear to be material to patentability.

Finally, Apple likely included the Smith Article because it could not be disputed that Applicants knew about the Smith Article as the author of that article, James E. Smith, was a professor at the University of Wisconsin when the ‘752 Patent was filed.

WARF’S MOTION TO DISMISS THE INEQUITABLE CONDUCT AFFIRMATIVE DEFENSE AND COUNTERCLAIM

On 11 July 2014, WARF filed a motion to dismiss Apple’s inequitable conduct affirmative defense and counterclaim. On 17 December 2014, Judge Conley granted WARF’s motion to dismiss but did not do so with “prejudice,” which meant that Apple could raise it later in the case if it chose to do so.

With respect to materiality, Judge Conley held that “[f]rom the outset, there are problems with Apple’s allegations of materiality.” (See Page 5 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) Judge Conley held that “the choice of the word ‘likely’ is not entirely in line with the but-for materiality that a claim of inequitable conduct requires. Either the PTO would have disallowed the claim upon disclosure of the prior art references or it would not.” (See Page 5 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) Based on that, Judge Conley wrote that “Apple’s use of the word ‘likely,’ fails to meet the threshold required by Rule 9(b),” which governs the pleading of special matters such as fraud. (See Page 5 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴)

With respect to materiality of the Steely Patent, Judge Conley held that Apple’s allegations fail to meet the required standard for at least two reasons. (See Page 7 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) First, Judge Conley held that

“merely alleging that the Steely reference discloses the same ‘subject matter’ as the ‘752 patent falls woefully short of the correct level of particularity to plead inequitable conduct premised on anticipation, since Apple makes no attempt to identify (1) the particular claim limitations, or combination of limitations, that are supposedly absent from the record before the Examiner, and (2) the specific material, noncumulative disclosures in the Steely Patent. Without identifying *all* of the specific, material disclosures in the Steely Patent and where they are found, there is obviously little chance for the court to discern ‘how’ the Examiner would have used the Steely Patent to invalidate the particular claims of the ‘752 patent.”

(See Page 7 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴)

Second, Judge Conley similarly held that Apple’s allegations that the Steely Patent “in combination with other prior art ... invalidates claims of the ‘752 patent” is “similarly insufficient.” (See Page 8 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴)

With respect to materiality of the Smith Article, Judge Conley held that “the language of the counterclaim—‘in combination with other prior art’—lacks the specificity demanded by Rule 9(b).” (See Page 10 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) More specifically, Judge Conley explains that Apple’s

“allegations amount to mere conclusions, while failing (a) to identify what claims of the ‘752 patent are allegedly invalidated, (b) to compare the disclosures of the Smith Article to particular claim elements, and (c) to identify any specific ‘other prior art’ reference that ‘in combination with’ the Smith Article allegedly renders any claim of the ‘752 patent obvious.”

(See Page 10 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴)

With respect to deceptive intent, Judge Conley held that Apple failed to adequately plead this element for at least three reasons. Judge Conley first held that “Apple does not identify the *specific information* alleged to be material to the ‘752 patent.” [See Page 11 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴

(emphasis in original)]. Rather, Judge Conley found that Apple only alleged that the Applicants were aware of the Steely Patent and the Smith Article, and that Dr. Moshovos “recognized that the Steely Patent ‘identified the same problem as the ‘752 patent earlier than did he and his coinventors’ and that “Drs. Moshovos and Sohi were aware of the Smith Article generally and that they were aware of ‘the materiality of the Smith Article’s discussion of ‘branch prediction’ to the subject matter of the ‘752 patent.” (See Page 11 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) Judge Conley held that these allegations were “threadbare” and that “[i]dentifying the same problem as the patent in suit or discussing a related solution does not render a reference ‘but-for’ material,” i.e., a reference that, if disclosed, would have caused the PTO not to allow the claim (see Pages 11 and 12 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴).

THE FINAL QUESTION IS WHY APPLE CHOSE TO MAKE SUCH A SERIOUS ALLEGATION, ESPECIALLY GIVEN THAT INTEL, IN A PRIOR CASE INVOLVING THE SAME PATENT, DID NOT.

Judge Conley next found that Apple’s allegation that Dr. Moshovos and Dr. Sohi made a deliberate decision to deceive the PTO because they had a financial interest in seeing the ‘752 patent issue “flounder[ed]” because “any financial reward does not alone show an intent to deceive the USPTO.” (See Page 12 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴)

Third, Judge Conley held that Apple’s allegations of “deceptive conduct” “does not even clearly constitute deception.” (See Page 12 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) More specifically, Judge Conley held that “[a] fair reading of the allegations in the counterclaims, therefore, raises the question how the Steely Patent renders a ‘technically true’ statement regarding *an entirely different reference* vulnerable to an inequitable conduct challenge.” (See Page 13 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴)

Because Apple failed to plausibly plead the two elements required for inequitable conduct, namely, materiality and intent to deceive, Judge Conley dismissed Apple’s inequitable conduct claim. But Judge Conley dismissed it without prejudice, which meant that Apple could re-allege it later in the case if it could provide specific facts regarding these two elements, and not the generalized allegations that it previously made.

(See Pages 14 and 15 of *Wis. Alumni Rsch. Found. v. Apple, Inc.*⁴) But it does not appear that Apple re-raised these inequitable conduct allegations.

The final question is why Apple chose to make such a serious allegation, especially given that Intel, in a prior case involving the same patent, did not. Inequitable conduct is a serious allegation because the second element is that the Applicant committed fraud by intending to deceive the PTO. Although this is a serious allegation, inequitable conduct is one that patent litigators frequently make. As such, given the frequency of these allegations, allegations of inequitable conduct are not necessarily viewed, by lawyers, as seriously as an allegation of fraud otherwise would be.

Furthermore, Apple chose to include that allegation because a finding of inequitable conduct renders the patent unenforceable, i.e., Apple wins the case. By including it in their defenses and counterclaims, Apple evidently determined that even alleging a weak set of facts for inequitable conduct could be worth the rewards.

Additionally, Apple’s allegations were part of its defenses and counterclaims. Lawyers generally prefer to include every possible defense and counterclaim, even relatively weak ones, when they can, rather than wait until a later point in the case, where the other side may then argue that they have waived their right to assert that defense or counterclaim. Furthermore, by making those allegations, those defenses and counterclaims are now part of the case, and it will take the Court granting a motion to dismiss (which Judge Conley did in this case) to remove them from the case.

Finally, by making this allegation, Apple may have wanted to send a signal that it was playing scorched-earth defense, and that it would be a difficult case for WARF to win.

The next article in this series will continue to examine what happened in this case.

REFERENCES

1. *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1344, 2013 (Fed. Cir.).
2. *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1287, 2011 (Fed. Cir.) (annotations added).
3. *Wis. Alumni Res. Found. v. Apple Inc.*, No. 3:14-cv-00062, ECF No. 41, Jun. 13, 2014 (W.D. Wis.).
4. *Wis. Alumni Res. Found. v. Apple Inc.*, No. 3:14-cv-00062, ECF No. 78, Dec. 17, 2014 (W.D. Wis.).

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