IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC.,

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Plaintiff,

Ганин

: C.A. No. 08-309-LPS

FAIRCHILD SEMICONDUCTOR

INTERNATIONAL INC., FAIRCHILD

SEMICONDUCTOR CORPORATION, and

v.

SYSTEM GENERAL CORPORATION,

UNSEALED ON MAY 3, 2013

Defendants.

William J. Marsden, Jr., Esq., Joseph B. Warden, Esq., FISH & RICHARDSON, P.C., Wilmington, DE.

Frank E. Scherkenbach, Esq., FISH & RICHARDSON, P.C., Boston, MA.

Howard G. Pollack, Esq., Michael R. Headley, Esq., FISH & RICHARDSON, P.C., Redwood City, CA.

Attorneys for Plaintiff Power Integrations, Inc.

John G. Day, Esq., Lauren E. Maguire, Esq., Andrew C. Mayo, Esq., ASHBY & GEDDES, Wilmington, DE.

Blair M. Jacobs, Esq., Christina A. Ondrick, Esq., Rose S. Whelan, Esq., McDERMOT WILL & EMERY LLP, Washington, DC.

Terrence P. McMahon, Esq., McDERMOT WILL & EMERY LLP, Menlo Park, CA. Leigh J. Martinson, Esq., McDERMOT WILL & EMERY LLP, Boston, MA.

Attorneys for Defendants Fairchild Semiconductor International Inc., Fairchild Semiconductor Corporation, and System General Corporation.

MEMORANDUM OPINION

April 25, 2013 Wilmington, Delaware STARK, U.S. District Judge:

On May 23, 2008, Plaintiff Power Integrations, Inc. ("Power") filed a patent infringement action against Defendants Fairchild Semiconductor International, Inc., Fairchild Semiconductor Corporation, and System General Corporation (collectively, "Fairchild"), alleging that these parties infringe four U.S. patents: United States Patent Nos. 6,249,876 ("the '876 patent"); 6,107,851 ("the '851 patent"); 7,110,270 ("the '270 patent"); and 7,834,605 ("the '605 patent"). (D.I. 1) Fairchild filed an answer and counterclaim, alleging that Power infringes two Fairchild patents: United States Patent Nos. 7,259,972 ("the '972 patent"); and 7,352,595 ("the '595 patent"). (D.I. 49) Both sides raised inequitable conduct as a defense to each other's infringement claims. Power contends that Fairchild committed inequitable conduct during prosecution of the '972 patent. (D.I. 117, 135) Fairchild, in turn, contends that Power committed inequitable conduct during reexamination of the '851 patent. (D.I. 136)

In April 2012, the Court held a bench trial on inequitable conduct.¹ The parties completed post-trial briefing in June 2012. In addition to the post-trial briefs, both parties submitted proposed findings of fact and conclusions of law. (D.I. 586, 587, 607, 611)

This Opinion constitutes the Court's Findings of Fact and Conclusions of Law on whether the '972 patent and the '851 patent are unenforceable due to inequitable conduct. For the reasons explained below, the Court concludes that: (1) Fairchild did not commit inequitable conduct during prosecution of the '972 patent; and (2) Power did not commit inequitable conduct during reexamination of the '851 patent.

¹The trial transcript appears in the record as D.I. 601-602. All citations to the trial transcript are in the format "Tr." followed by the page number.

I. LEGAL STANDARDS

Applicants for patents and their legal representatives have a duty to prosecute patent application with candor, good faith, and honesty. *See Honeywell Int'l Inc. v. Universal Avionics Sys. Corp.*, 488 F.3d 982, 999 (Fed. Cir. 2007); 37 C.F.R. § 1.56(a). A breach of this duty constitutes inequitable conduct. *See Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995). If it is established that a patent applicant engaged in inequitable conduct, the patent is unenforceable. *See Kingsdown Med. Consultants v. Hollister Inc.*, 863 F.2d 867, 877 (Fed. Cir. 1988). "The ultimate determination of inequitable conduct is committed to the trial judge's discretion." *Molins*, 48 F.3d at 1178.

To prevail on an inequitable conduct claim, the moving party must establish, by clear and convincing evidence, that "the applicant misrepresented or omitted material information with the specific intent to deceive" the U.S. Patent and Trademark Office ("PTO"). *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1287 (Fed. Cir. 2011) (en banc). "Intent and materiality are separate requirements." *Id.* at 1290. Thus, the moving party must prove both materiality and intent by clear and convincing evidence. *See id.*

With respect to materiality, a prior art reference "is but for material if the PTO would not have allowed a claim had it been aware of the undisclosed prior art." *Id.* at 1291. But-for materiality must be shown by a preponderance of the evidence, "giv[ing] claims their broadest reasonable construction." *Id.* at 1291-92; *see also Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1334 (Fed. Cir. 2012).

With respect to intent, the moving party "must prove by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate

decision to withhold it." *Therasense*, 649 F.3d at 1290; see also 1st Media, LLC v. Elec. Arts, Inc., 694 F.3d 1367, 1374-75 (Fed. Cir. 2012). Because direct evidence of deceptive intent is rare, a court may infer intent from indirect and circumstantial evidence. See Therasense, 649 F.3d at 1290. However, "[i]ntent to deceive cannot be inferred solely from the fact that information was not disclosed; there must be a factual basis for finding a deceptive intent." Herbert v. Lisle Corp., 99 F.3d 1109, 1116 (Fed. Cir. 1996). "[I]ntent to deceive must be the single most reasonable inference able to be drawn from the evidence." Therasense, 649 F.3d at 1291 (internal quotation marks omitted). In other words, "the evidence must be sufficient to require a finding of deceitful intent in light of all of the circumstances." Id. (internal quotation marks and citation omitted) (emphasis in original). By contrast, "when there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found." Id. at 1290-91.

II. POWER'S CLAIM OF INEQUITABLE CONDUCT WITH RESPECT TO THE '972 PATENT

Power contends that the named inventor of the '972 patent committed inequitable conduct by deliberately withholding two purportedly material references from the PTO: U.S. Patent No. 6,249,876 ("the '876 patent) and U.S. Patent No. 6,229,366 ("the '366 patent"). As explained below, the Court finds that Power failed to prove inequitable conduct by clear and convincing evidence.

A. Findings of Fact

1. U.S. Patent No. 7,259,972, entitled "Primary-Side-Control Power Converter Having Switching Controller Using Frequency Hopping and Voltage and Current Control Loops," issued on August 21, 2007 from an application filed on October 7, 2004. (DX-4.3) The '972 patent is assigned to Defendant System General Corporation ("SG") and names Mr. Ta-

yung "Tom" Yang ("Mr. Yang") as the sole inventor. At the time of filing, Mr. Yang was the CEO and chairman of SG. (Tr. at 1115)

- 2. The '972 patent was prosecuted by the law firm Finnegan, Henderson, Farabow, Garrett & Dunner LLP ("Finnegan"). (Tr. at 1965-66) The application that led to the '972 patent was handled by an SG patent engineer named Edmund Chang. (Tr. at 2464)
- 3. Mr. Tom Yang is also a named inventor on four additional patents: (1) U.S. Patent No. 7,026,851 ("the '851 patent"), entitled "PWM Controller Having Frequency Jitter for Power Supplies," filed on May 12, 2004; (2) U.S. Patent No. 7,184,283 ("the '283 patent"), entitled "Switching Frequency Jitter Having Output Ripple Cancel for Power Supplies," filed on August 9, 2004; (3) U.S. Patent No. 7,489,529 ("the '529 patent"), entitled "Control Circuit Having Frequency Modulation to Reduce EMI of Power Converters," filed on November 8, 2005; and (4) U.S. Patent No. 7,577,002 ("the '002 patent"), entitled "Frequency Hopping Control Circuit for Reducing EMI of Power Supplies," filed on December 8, 2005. (DX-227.1, DX-229.1, DX-978, DX-984) The applications for all four of these patents were pending before the PTO during prosecution of the '972 patent.
- 4. The '851, '283, '529, and '002 patents were prosecuted by J.C. Patents, Inc. ("J.C. Patents") on behalf of Mr. Yang and SG. (Tr. at 1966, 2469-73) The '851, '283, '529, and '002 patents were handled by an SG patent engineer named Wilson Chen. (Tr. at 2469, 2471-72).
 - 5. The "Description of Related Art" section of the '851 patent states:
 - In recent development, many prior arts have been proposed to reduce the EMI using frequency jitter. For example, "Effects of Switching Frequency Modulation on EMI Performance of a Converter Using Spread Spectrum Approach" by M. Rahkala, T. Suntio, K. Kalliomaki, APEC 2002 (Applied Power Electronics

Conference and Exposition, 2002), 17-Annual, IEEE, Volume 1, 10-14, Mar., 2002, Pages: 93-99; "Offline Converter with Integrated Softstart and Frequency Jitter" by Balu Balakrishnan, Alex Djenguerian, U.S. Pat. No. 6,229,366, May 8, 2001; and "Frequency Jittering Control for Varying the Switching Frequency of a Power Supply" by Balu Balakrishnan, Alex Djenguerian, U.S. Pat. No. 6,249,876, Jun. 19, 2001. However, the disadvantage of these prior arts is that the frequency jitter generates an undesirable ripple signal at the output of the power supply.

(See DX-227.1 (Yang '851 patent) at 1:28-38) The '283, '529, and '002 patents include substantially similar statements. (See DX-229.1 (Yang '283 patent) at 1:29-45; DX-978 (Yang '529 patent) at 1:35-54; DX-984 (Yang '002 patent) at 1:37-49)

- 6. Prior to filing each of the '972, '851, '283, '529, and '002 patents, Mr. Yang signed a declaration swearing that he reviewed and understood their specifications. (DX-11.1 at FSG00008402; Tr. at 1976-77, 1984-86, 1988-90)
- 7. Mr. Yang was made aware of Power's '876 and '366 patents by a Fairchild attorney during a due diligence investigation conducted as part of merger discussions between Fairchild and SG in early 2007. (Tr. at 1990-93, 2473)
- 8. Mr. Yang understood his obligation to disclose any known prior art when he filed his patent applications. (Tr. at 1968-69, 1977-78, 1986-87, 2009-10, 2483)
- 9. At no point during prosecution of the '972 patent were the '876 or '366 patents disclosed to the PTO. (Tr. at 2490)

B. Analysis

1. Materiality

Power contends that the '876 and '366 patents are material for two reasons.² First, according to Power, "there is no dispute" that the '876 and '366 patents anticipate a number of claims of the '972 patent. (D.I. 588 at 2-3) Second, the '972 patent was allowed after Fairchild amended the claims to include a "frequency jitter" limitation, a feature Power believes is found in both the '876 and '366 patents. According to Power, had the PTO been aware of the '876 and '366 patents during prosecution, the '972 patent would not have issued. (D.I. 642 at 2)

Fairchild does not substantively rebut Power's accusations, instead contending that Power failed to offer sufficient evidence of materiality at trial. That is, Fairchild relies on procedure, not substance. According to Fairchild, the evidence of materiality cited in Power's post-trial brief – including claim charts and expert testimony – was not submitted as part of the Pre-Trial Order and, thus, is not properly before the Court. (D.I. 607 at 9-10) Fairchild asks the Court to strike this evidence from the record and find that Power has failed to prove materiality.³

The Court declines to resolve this dispute. Even assuming Power's evidence of materiality is properly part of the record, and further assuming Power can establish the materiality of the '876 and '366 patents, Power has failed to show that Mr. Yang deliberately withheld these references in order to deceive the PTO. Accordingly, even assuming materiality,

²Power also asks the Court to "infer" materiality based on Fairchild withdrawing certain claims during the litigation. (D.I. 642 at 3) This argument is not persuasive, particularly as there are many reasons – including the welcome motivation to streamline a case for the jury – to pare down the number of asserted claims before trial.

³Specifically, Fairchild asks the Court to strike the following evidence: D.I. 589, Declaration of William J. Marsden, Jr., Exs. A, B, C, D, G, H, I, M, N, O. (D.I. 607 at 9 n.3)

Power has failed to show the '972 patent is unenforceable due to inequitable conduct.4

2. Intent

To prove intent, Power must show that Mr. Yang "knew of the reference[s], knew that [they were] material, and made a deliberate decision to withhold [them]." *Therasense*, 649 F.3d at 1290. Power contends that Mr. Yang knew of the '876 and '366 patents (and their materiality) given that: (1) the '876 and '366 patents were identified in Mr. Yang's co-pending '851, '283, '529, and '002 patents; and (2) Mr. Yang was reminded of the '876 and '366 patents during a 2007 due diligence investigation conducted as part of the merger between Fairchild and SG. Power asks the Court to infer that Mr. Yang made a deliberate decision to withhold the '876 and '366 patents from the PTO due to: (1) the selective disclosure of the '876 and '366 patents in Mr. Yang's patent applications; and (2) Mr. Yang's allegedly inconsistent testimony at various stages of the case. (D.I. 588 at 8-16)

There is no dispute that the '851, '283, '529, and '002 patents describe the '876 and '366 patents in their respective "Description of Related Art" sections. There is also no dispute that, as a listed inventor on the '851, '283, '529, and '002 patents, Mr. Yang would have read the specifications for these four patents (i.e., Yang's '851, '283, '529, and '002 patents); indeed, Mr. Yang signed declarations attesting to this fact. (Tr. at 1976-77, 1984-86, 1988-90)

That Mr. Yang was generally aware of the existence of the '876 and '366 patents, however, does not mean he also was aware of those patents' specific disclosures. As the Federal

⁴On April 24, 2013, Power submitted a letter to the Court providing additional evidence of materiality of the '876 and '366 patents in the form of communications issued by the PTO in an ongoing reexamination. (D.I. 733) This evidence does not change the Court's conclusion because, even assuming materiality, Power has failed to prove that Mr. Yang intended to deceive the PTO.

Circuit explained in *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1330 (Fed. Cir. 2009): "A reference may be many pages long, and its various teachings may be relevant to different applications for different reasons. Thus, one cannot assume that an individual, who generally knew that a reference existed, also knew of the specific material information contained in that reference." At trial, Mr. Yang credibly testified that he did not read the '876 or '366 patents at the time the specifications for the '851, '283, '529, and '002 patents were filed because he focused on the technical accuracy of the specifications for his own patents, not on the related art referenced for background purposes. (Tr. at 1977-90)

Mr. Yang acknowledged that the '876 and '366 patents were brought to his attention during the 2007 due diligence merger-related investigation. (Tr. at 1991-96, 2473) Questioned on this topic at trial, Mr. Yang explained that his due diligence investigation focused on whether any SG products infringed third-party patents and, in this context, Mr. Yang simply failed to appreciate that the '876 and '366 patents may also have been relevant to the prosecution of one of his many patents. (Tr. at 1996) The Court finds Mr. Yang's testimony to be credible.

Mr. Yang further testified that he believed the '972 patent to be limited to frequency jitter on the primary side of a power converter, while the '876 and '366 patents, in Mr. Yang's mind, related to secondary side jitter control. (Tr. at 2479-81) This misunderstanding contributed to Mr. Yang's lack of appreciation of the relevance of the '876 and '366 patents. While the Court ultimately concluded that the '972 patent was not limited to primary side applications, the Court's subsequent conclusion does not render Mr. Yang's state of mind in 2004-2007 unreasonable, particularly given that primary side control is discussed throughout the '972 patent and because Mr. Yang is not a patent expert.

Deceptive intent is not the "single most reasonable inference" to be drawn from the evidence presented. *Therasense*, 649 F.3d at 1291. The '972 patent was drafted and prosecuted by a different team than the '851, '283, '529, and '002 patents.⁵ (Tr. at 2464, 2469-73) From these facts, a reasonable inference is that the '876 and '366 patents were simply overlooked. Indeed, "[t]he mere fact that an applicant disclosed a reference during prosecution of one application, but did not disclose it during prosecution of a related application, is insufficient to meet the threshold level of deceptive intent required to support an allegation of inequitable conduct." *Exergen*, 575 F.3d at 1331.

The Court also declines to infer deceptive intent from alleged inconsistencies in Mr. Yang's testimony. Having reviewed Mr. Yang's deposition and trial testimony, the Court finds that the testimony cited by Power is, for the most part, not inconsistent. For instance, contrary to Power's assertion (D.I. 588 at 15), Mr. Yang's signed declaration stating that he read and understood the '851 patent before it was filed is not inconsistent with his testimony that he was not aware of the specific disclosure of the '876 and '366 patents. Mr. Yang did not swear to have read each prior art reference cited in the background sections of his patents. Moreover, even where Mr. Yang's testimony could be interpreted as "inconsistent," these inconsistencies do not persuade the Court that Mr. Yang intended to deceive the PTO. Mr. Yang, who is not a native English speaker, testified numerous times over the course of several years in connection with this case. The fact that Power's attorneys were able to elicit arguably inconsistent testimony from Mr. Yang on certain points during this lengthy litigation is not surprising. It is quite possible that

⁵The record does not support a finding that SG's decision to use a different firm (Finnegan) or a different patent engineer from SG (Edmund Chang) to prosecute the '972 patent was part of a scheme to defraud the PTO.

Mr. Yang's recollection of the events about which he was testifying was refreshed, or that his recollection changed over the years of this litigation. The Court heard and observed Mr. Yang's testimony at trial and found him to be a credible witness.

For all of these reasons, the Court finds that Power failed to show by clear and convincing evidence that Mr. Yang had deceptive intent. Therefore, the Court concludes that Power failed to prove Mr. Yang committed inequitable conduct during prosecution of the '972 patent.

III. FAIRCHILD'S CLAIM OF INEQUITABLE CONDUCT WITH RESPECT TO THE '851 PATENT

Fairchild accuses Power's Balu Balakrishnan of committing inequitable conduct during reexamination of the '851 patent. The Court concludes that Fairchild has failed to establish by clear and convincing evidence that Mr. Balakrishnan engaged in inequitable conduct.

A. Findings of Fact

- 1. U.S. Patent No. 6,107,851, entitled "Offline Converter with Integrated Softstart and Frequency Jitter," issued on August 22, 2000 from an application filed on May 18, 1998.

 (D.I. 585 Ex. A (DX-1)) The '851 patent is assigned to Power Integrations and names Balu Balakrishnan, Alex Djenguerian, and Leif Lund as inventors.
- 2. On November 9, 2006, Fairchild filed a Request for *Ex Parte* Reexamination of the '851 patent. On December 19, 2006, the PTO granted reexamination for claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17. (D.I. 585 Ex. B at FSG2212673-87)
- 3. On April 7, 2008, the PTO issued a non-final Office Action rejecting claims 1, 2, 4, 7, 9, 10, 11, 13, 16, and 17 under 35 U.S.C. § 102(b) as anticipated by the prior art SGS-Thomson Microelectronics TEA2262, "Switched Mode Power Supply Controller" (April 1996) ("TEA2262") reference. (D.I. 585 Ex. B at FSG02212484) In the same Office Action, the PTO

rejected claims 1, 2, 7, 9, 10, 11, 16, and 17 under 35 U.S.C. § 103(a) as being obvious in view of Power's SMP211 data sheet ("SMP211"). (D.I. 585 Ex. B at FSG02212492) As part of the obviousness rejection, the PTO explicitly stated that the SMP211 taught an "oscillator . . . further providing a maximum duty cycle signal." (D.I. 585 Ex. B at FSG02212493)

- 4. In response to the anticipation rejection, Power argued that the TEA2262 reference "fails to disclose, teach or suggest *said oscillator further providing a maximum duty cycle signal* in the manner expressly claimed and described in the '851 patent." (D.I. 585 Ex. B, DX-13 at FSG2212446) (emphasis in original)
- 5. The PTO agreed that the TEA2262 reference did not disclose the claimed "oscillator further providing a maximum duty cycle signal comprising a first state and a second state" and withdrew the anticipation rejection with respect to the TEA2262 reference. (D.I. 585 Ex. B at FSG02212277)
- 6. Power has submitted numerous references to the PTO disclosing an oscillator providing a maximum duty cycle signal, including U.S. Patent No. 5,383,381 (PX-723); U.S. Patent No. 5,461,303 (PX-724); U.S. Patent No. 5,335,162 (PX-324); U.S. Patent No. 5,498,995 (PX-326); the Pelly article (PX-466); and the Bindra article (PX-459). (D.I. 585 Ex. B at FSG022122069-076)

B. Analysis

During reexamination of the '851 patent, the PTO rejected independent claims 1 and 11 as being anticipated by the TEA2262 reference. In response to that rejection, Power argued that the TEA2262 reference did not disclose a "maximum duty cycle signal provided by an oscillator." Fairchild contends that this argument was a "misrepresentation" because Mr.

Balakrishnan did not also inform the Examiner that such oscillators were well known in the art.

According to Fairchild, the Examiner only withdrew the rejection because he mistakenly believed that an oscillator providing a maximum duty cycle signal was novel. In Fairchild's view, but-for Mr. Balakrishnan's misrepresentation and subsequent silence, the '851 patent would not have survived reexamination. (D.I. 584 at 9-10)

1. Materiality

Power submitted numerous references disclosing an oscillator with a maximum duty cycle signal during both the original prosecution and reexamination of the '851 patent. "[A] patentee has no obligation to disclose an otherwise material reference if the reference is cumulative or less material than those already before the examiner." *Halliburton Co. v. Schlumberger Tech. Corp.*, 925 F.2d 1435, 1440 (Fed. Cir. 1991). In prior litigation between Power and Fairchild involving the '851 patent, the Court rejected Fairchild's inequitable conduct allegations and found that "Power Integrations disclosed prior art referencing oscillators with maximum duty cycle signals." (C.A. No. 04-1371, D.I. 683 at 12) That same prior art was available to the Examiner during the reexamination proceedings. Hence, any further submission by Power with respect to this feature would have been cumulative.

Therefore, the Court concludes that Fairchild has failed to satisfy the "materiality" prong of the inequitable conduct test.

2. Intent

Mr. Balakrishnan did not mislead the PTO. The arguments presented for the TEA2262 reference were factually correct, as even Fairchild now concedes that this reference does not

⁶Fairchild does not address the cumulative argument in its reply papers.

disclose a "maximum duty cycle signal provided by an oscillator." (D.I. 584 at 1, 13) Hence, the Examiner correctly withdrew the anticipation rejection. *See Zenith Elec. Corp. v. PDI Comm.*Sys. Inc, 522 F.3d 1348, 1363 (Fed. Cir. 2008) (stating anticipation requires that single prior art reference disclose each limitation of claim in dispute).

Contrary to Fairchild's contention, Mr. Balakrishnan did not mislead the Examiner into believing that an oscillator with a maximum duty cycle signal was "a separate per se novel limitation." (D.I. 584 at 14) The arguments Mr. Balakrishnan presented to the PTO were limited to the specific disclosure of the TEA2262 reference and focused on the differences between that reference and the claims. The Examiner identified an oscillator with a maximum duty cycle signal in at least one additional prior art reference: the SMP211 datasheet. (D.I. 585 Ex. B at FSG022122493) Thus, the Court cannot conclude that the Examiner considered the oscillator to be a point of novelty.

Intent to deceive is not the "single most reasonable inference" to be drawn from the evidence presented. *Therasense*, 649 F.3d at 1291. Mr. Balakrishnan credibly testified that he believed the Examiner was aware that oscillators with maximum duty cycle signals were known in the prior art. (Tr. at 2289-97) This belief is more than reasonable given that the Examiner expressly identified such an oscillator in the Office Action and signed several Information Disclosure Statements indicating that he considered the references Power submitted that disclose this feature. (*See, e.g.*, D.I. 585 Ex. B at FSG022122069-076)

Fairchild has failed to prove deceptive intent by clear and convincing evidence. Hence, Fairchild has likewise failed to prove that the '851 patent is unenforceable due to inequitable

conduct.7

IV. CONCLUSION

Having reviewed the evidence of record, the Court concludes that Fairchild did not commit inequitable conduct during prosecution of the '972 patent. The Court also concludes that Power did not commit inequitable conduct during reexamination of the '851 patent.

⁷The Court denies Power's request (in its Answering Brief) to impose sanctions on Fairchild for the purported frivolousness of Fairchild's inequitable conduct argument.