

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA

v.

HAOYANG YU

No. 19-cr-10195-WGY

REDACTED

**DEFENDANT HAOYANG YU’S MOTION
FOR JUDGMENT OF ACQUITTAL OR, ALTERNATIVELY, FOR A NEW TRIAL**

Defendant, Haoyang Yu, respectfully renews his motion for a judgment of acquittal pursuant to Fed. R. Crim. P. 29 as to the single count of conviction against him (Count One), because the prosecution failed to prove each and every element of the charged offense beyond a reasonable doubt. Among independent reasons for acquittal, as explained below, the trial evidence:

- failed to prove that Mr. Yu ever possessed “*the* design layout and GDS file for *the* HMC1022A microchip” as alleged in Count One;
- failed to prove that the design layout and GDS file for the HMC1022A constituted or contained a “trade secret” on the date of the alleged offense in June 2019, which was after ADI had released the chip for sale and its features were “readily ascertainable”;
- failed to prove that the design layout and GDS file for an abandoned HMC1022A prototype design constituted or contained any “trade secret,” at any time, especially given the close similarity to competing chips on the market and “textbook” knowledge of the underlying amplifier architecture;
- failed to prove that Mr. Yu *knew* the design layout and GDS file for an abandoned HMC1022A prototype design constituted or contained a “trade secret”; and
- failed to prove that Mr. Yu specifically intended to “injure” ADI or knew that he would “injure” ADI by possessing the design layout and GDS file for an abandoned HMC1022A prototype design.

In the alternative, Mr. Yu moves for a new trial pursuant to Fed. R. Crim. P. 33 in the interest of justice due to deficiencies in this Court’s jury instructions and misleading statements in the

prosecution's closing argument.

I. The Trial Evidence Was Insufficient to Convict Mr. Yu on Count One.

Count One of the Third Superseding Indictment alleged unlawful possession of a trade secret, in violation of 18 U.S.C. § 1832(a)(3) & (a)(4), on or about June 14, 2019, specifically, “the design layout and GDS file for the HMC1022A microchip.”

In order to prevail, the prosecution was required to prove each of the following elements beyond a reasonable doubt:

First, that Mr. Yu possessed the alleged “trade secret” without authority. The term “trade secret” means all forms and types of business, scientific, technical, or engineering information, including program devices, designs, prototypes, methods, techniques, processes, procedures, programs or codes, whether tangible or intangible, and however stored if the owner has taken reasonable measures to keep the information secret and if the information derives independent economic value, actual or potential, from not being generally known to or readily ascertainable through proper means, by another person who or company that can obtain economic value from the disclosure or use of the information.

Second, that the alleged trade secret was related to or included in a product produced for or placed in interstate or foreign commerce.

Third, that Mr. Yu acted knowingly, including knowledge that the information at issue was, in fact, a trade secret.

Fourth, that Mr. Yu intended to economically benefit someone other than ADI.

Fifth, that Mr. Yu intended to injure ADI or knew that his conduct would do so.

See 18 U.S.C. § 1832(a)(3); 18 U.S.C. § 1839(3); 5/25/22 Tr. at 22-26 (this Court's jury instructions).

In addition, while the alleged “on or about” date in the indictment is not an element of the offense, the prosecution is required to prove that the crime occurred “within a reasonable time of the date stated in the indictment”—in this case, June 14, 2019, the date on which electronic devices containing the alleged trade secrets were seized from Mr. Yu’s home pursuant to a search warrant. *United States v. Campbell*, 732 F. 2d 1017, 1020 (1st Cir. 1984); *see also* 1 Mod. Fed. Jury Ins. § 3-12 (explaining that prosecution must prove “a substantial similarity” between “the dates alleged in the indictment and the date established by testimony or exhibits”).

Moreover, the *specific* date alleged in the indictment is material to the jury’s decision if the alleged conduct could not have happened or would not constitute an offense on the charged date. *See, e.g., id.* cmt. (explaining that “on our about” instruction “should not be given if the statute of limitations is in issue”); *Evans v. Gerry*, 647 F.3d 30, 35 (1st Cir. 2011) (“*Ex Post Facto* analysis” depends “on the time of the criminal act”); *United States v. Cicero*, 22 F.3d 1156, 1160-61 (D. C. Cir. 1994) (holding that in case of alibi defense, the trial court erred by failing to direct “jurors to consider whether the government’s proof has in fact focused on specific dates, and, if so, whether the defendant’s alibi credibly addresses those dates”); *United States v. Bourque*, 541 F.2d 290, 295 (1st Cir. 1976) (finding error in failure to instruct jury regarding obligation to file tax return on specific date charged in indictment); *United States v. Goldstein*, 502 F.2d 526, 530 (3d Cir. 1974) (finding prejudicial constructive amendment of indictment where “conflict in dates is not a mere formality or an innocuous difference of unimportant data but is, rather, a matter of substance”).

The trial evidence was insufficient sustain Mr. Yu’s conviction on Count One.

A. Legal Standard

This Court “must enter judgment of acquittal of any offense for which the evidence is insufficient to obtain a conviction,” Fed. R. Crim. P. 29(a), because a defendant cannot be convicted “except upon proof of each element of the offense charged beyond a reasonable doubt.”

Oses v. Massachusetts, 775 F. Supp. 43, 465 (D. Mass. 1991). That high bar is “an essential component” of due process, reducing the risk of wrongful convictions, improving the fundamental fairness of criminal proceedings, and enhancing public confidence in the legal system. *Murray v. United States*, No. 01-cv-11271-WGY, 2002 U.S. Dist. LEXIS 8980, at *21-22 (D. Mass. May 10, 2002) (quoting *In re Winship*, 397 U.S. 358, 363 (1970)) (stating the requirement of proof beyond a reasonable doubt “provides concrete substance for the presumption of innocence—that bedrock, axiomatic and elementary principle whose enforcement lies at the foundation of the administration of criminal law”).

When a defendant challenges a jury’s verdict, “the inquiry focuses on whether a rational jury could have found that the government proved each element of the crime beyond a reasonable doubt.” *United States v. Appolon*, 715 F.3d 362, 367 (1st Cir. 2013). In conducting that analysis, this Court must “reject those evidentiary interpretations and illations that are unreasonable, insupportable, or overly speculative.” *United States v. Spinney*, 65 F.3d 231, 234 (1st Cir. 1995).

If the evidence viewed in the light most favorable to the verdict gives equal or nearly equal circumstantial support to a theory of guilt and a theory of innocence of the crime charged, this court must reverse the conviction. This is so because . . . where an equal or nearly equal theory of guilt and a theory of innocence is supported by the evidence viewed in the light most favorable to the prosecution, “a reasonable jury *must necessarily entertain* a reasonable doubt.”

United States v. Flores-Rivera, 56 F.3d 319, 323 (1st Cir. 1995) (quoting *United States v. Sanchez*, 961 F.2d 1169, 1173 (5th Cir. 1992)) (emphasis in original); see *United States v. Lopez-Diaz*, 794 F.3d 106, 110 (1st Cir. 2015) (vacating convictions and recognizing “deference to jury verdicts is not without limit”).

Evaluating the sufficiency of the evidence is “especially important in criminal cases, given the prosecution’s obligation to prove every element of an offense beyond a reasonable doubt.” *Spinney*, 65 F.3d at 234. Where “the chain of inferences forged by the prosecution is too loose,”

the jury is left to speculate about a key fact, or sufficient proof is altogether missing on any element, a conviction must be vacated. *United States v. Houlihan*, 92 F.3d 1271, 1295 (1st Cir. 1996).

B. Argument

The trial evidence was insufficient to convict Mr. Yu on Count One for multiple, independent reasons, as set forth below.

1. The trial evidence failed to establish that Mr. Yu *ever* possessed “the design layout and GDS file for the HMC1022A microchip” as alleged in Count One.

Count One charged Mr. Yu with unlawfully possessing “[t]he design layout and GDS file for *the* HMC1022A microchip” (emphasis added).

1	June 14, 2019	The design layout and GDS file for the HMC1022A microchip
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D.E. 178 at 15.

“‘The’ is a word of limitation as opposed to the indefinite or generalizing force of ‘a’ or ‘an.’” *Am. Bus Ass’n v. Slater*, 231 F.3d 1, 4-5 (D.C. Cir. 2000) (“It is a rule of law well established that the definite article ‘the’ particularizes the subject which it precedes.”); *see also Hernandez v. Williams*, 829 F.3d 1068, 1074 (9th Cir. 2016) (holding that “the” refers a particular, singular object) (citing BLACK’S LAW DICTIONARY 1647 (4th ed. 1968) (providing as an example that “[t]he’ house means only one house”)). Thus, by its plain language, Count One of the Third Superseding Indictment charged Mr. Yu with possessing one specific thing: *the* actual design layout and GDS file for manufacture of *the* actual HMC1022A microchip, the product that ADI released and sold in interstate commerce.

But there was no evidence whatsoever at trial that Mr. Yu *ever* possessed the design layout and GDS file for the actual HMC1022A microchip; in fact, he *never* did. Rather, the limited evidence at trial was only that a design layout and GDS file for an earlier, abandoned “prototype”

design, which ADI created during its “translation” of the legacy HMC1022 to the HMC1022A, was found on his computer. *See* Exhibit 335 (attached) (layout image from GDS file for HMC1022A “prototype” design from ADI’s system) and Exhibit 336 p. 2 (attached) (identical layout image from GDS file on Mr. Yu’s computer). Robert Norton, the ADI layout engineer, testified with regard to Exhibit 335:

[MR. MARX:] [L]et’s start a little bit further back in time. There was originally a part called the 1022, is that right?

A. Yes.

Q. Okay. And that was a Hittite part?

A. Correct.

Q. And when ADI bought Hittite, they had to go through what’s been called a “translation process,” is that right?

A. Correct.

Q. And they had to convert the layout, change it from the 1022 to 1022A, so it could be built by a new factory, is that right?

A. Correct.

Q. Okay. And eventually ADI abandoned the HMC1022A and took this design in a different direction, is that right?

A. Um, yes, we stopped selling the 1022 and released the 1022A.

Q. In this version or in a different version?

A. Um, this is not the final version.

Q. Okay. So it was this version, um, that was abandoned and some other version was eventually actually released to the public, is that right?

MR. CASEY: Objection.

THE COURT: No, overruled. Is that correct? Do you agree with what he’s suggested in this question?

THE WITNESS: This is not the final version that was released for sale, this is a prototype along the way.

THE COURT: So, um, the question is correct in that the original, um, the company went in a different direction, but what you’re being shown is a prototype, not what was ultimately released, is that correct?

THE WITNESS: That is correct.

THE COURT: All right, go from there.

MR. MARX: Thank you, your Honor.

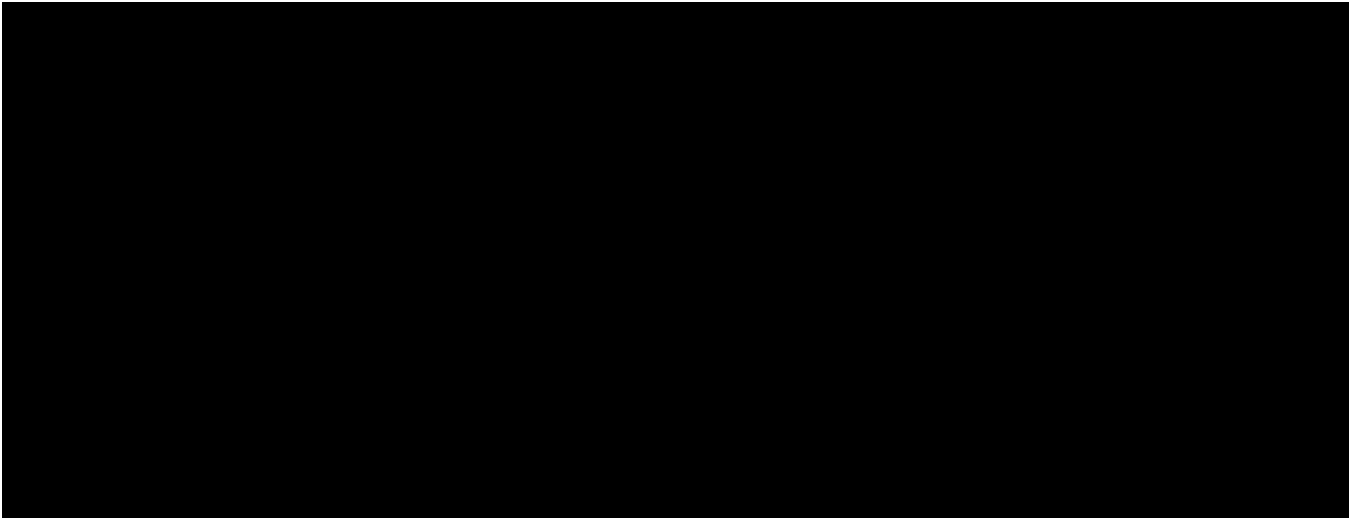
Q. So this version of the 1022A, ADI never sold, is that right?

A. Correct.

5/12/22 Tr. at 54-55. Based on the evidence at trial, Exhibit 335 was the only “design layout” related in any way to the HMC1022A that Mr. Yu ever possessed. And it was a prototype design,

which ADI abandoned, never sold, and from which it “went in a different direction” to develop *the* actual HMC1022A chip that it eventually released.

Meanwhile, the trial evidence established that the “new direction” in the final released design of the HCM1022A (Exhibit 339, attached) included, among other things, a notably different “drain bus” with variably sized segments instead of identically sized segments and square corners instead of rounded corners:



Simply put, Count One of the Third Superseding Indictment did *not* charge Mr. Yu with possessing “*a*” design layout and GDS file for “*an*” abandoned prototype design related to what ADI eventually released as the HMC1022A microchip; it expressly charged him with possession of “*the*” design layout and GDS file for “*the*” HMC1022A microchip itself.¹ At this juncture,

¹ This unambiguous, limiting language in Count One of the Third Superseding Indictment cannot be ignored as an inadvertent imprecision or a harmless mistake. Indeed, when the prosecution realized it had made an unrelated error in drafting the Third Superseding Indictment, it filed a motion to correct. *See* D.E. 196 (moving to correct Count Four to specify “the design layout and GDS file for the HMC906A microchip” (emphasis added), because the indictment as issued omitted the “A” at the end of the description). Moreover, prior indictments in this case contained more expansive allegations, concerning plural “files,” in each of the trade secret counts. *See, e.g.*, D.E. 137 (Second Superseding Indictment) (Counts 1-4, alleging “Performance data and specifications, schematics, design layout and modeling files, manufacturing and fabrication process files, and testing procedures” for various chips); D.E. 78 (First Superseding Indictment) (containing similar, plural formulations of trade secret charges); D.E. 1 (original Indictment) (containing similar, plural formulations). By contrast, the Third Superseding indictment

broadening the now-operative indictment by, in effect, changing “the” to “a” in Count One as an attempt to encompass the actual trial evidence about an abandoned prototype design for HMC1022A would be an impermissible constructive amendment. *See United States v. Brandao*, 539 F.3d 44, 57 (1st Cir. 2008) (“A constructive amendment occurs when the charging terms of an indictment are altered, either literally or in effect, by prosecution or court after the grand jury has last passed upon them....[A] court cannot permit a defendant to be tried on charges that are not made in the indictment against him.”) (internal citations and quotation marks omitted). Because there was no evidence at trial that Mr. Yu *ever* actually possessed the alleged “trade secret” charged in Count One, a judgment of acquittal must enter.

2. The trial evidence failed to establish that the layout and GDS file for the HMC1022A was still a “trade secret” on the date of the alleged offense in June 2019.

The only distinguishing fact about the HMC1022A that could potentially explain the jury’s guilty verdict on Count One coupled with acquittals on the similar trade secret charges in Counts Two through Eight is that, alone among all the chips named in counts of the Third Superseding Indictment, the HMC1022A was not “released to sale” until February 15, 2019, which was after Mr. Yu’s departure from ADI on July 31, 2017.² While the prosecution misleadingly argued in its closing that Mr. Yu “stole” chip designs before corresponding products “were public in any form,” 5/25/22 Tr. at 51, Mr. Yu was not charged with *stealing* the layout and GDS file for the HMC1022A during his tenure at ADI from July 2014 through July 2017—before ADI released the

necessarily and properly narrowed and specified the particular alleged trade secret at issue in each count. Having made those charging choices, and having asked the jury to render its verdict on them, the prosecution must be held to them.

² *See* Exhibit 1 (attached) (showing that HMC1022A, alone, was “released to sale” on February 15, 2019, while all other chips were released on dates before Mr. Yu left ADI on July 31, 2017).

HMC1022A to the market. Rather, he was charged with unlawfully *possessing* the layout and GDS file for the HMC1022A, allegedly still then a trade secret, in June 2019, nearly two years later.

By then, however, ADI had released the HMC1022A for sale. In February 2019, four months *before* Mr. Yu allegedly committed the charged *possession* offense in June 2019, ADI marketed and sold the HMC1022A to the public. Therefore, by the time of the charged offense, the layout design and critical features of the released HMC1022A were “readily ascertainable” by examination of the released product—not trade secrets—just like the other products specified in Counts Two through Eight, on which the jury acquitted Mr. Yu. *See also, e.g.,* 5/20/22 Tr. at 44-45 (Nordquist testimony confirming that MMICs can be “reverse engineered,” meaning that anyone “can take a chip, look at it under a microscope, discern the things you need to know, and use that information to make a functionally equivalent chip”); *see also BondPro Corp. v. Siemens Power Generation, Inc.*, 463 F.3d 702, 706 (7th Cir. 2006) (“A trade secret that becomes public knowledge is no longer a trade secret.”); *cf. Rockwell Graphic Sys., Inc. v. Dev. Indus., Inc.*, 925 F.2d 174, 179 (7th Cir. 1991) (“[I]f the plaintiff has allowed his trade secret to fall into the public domain, he would enjoy a windfall if permitted to recover damages merely because the defendant took the secret from him, rather than from the public domain as it could have done with impunity.”).

Absent the misleading closing argument by the prosecution, which pointed the jury to the timing of an *uncharged* purported “theft” (before Mr. Yu left ADI in July 2017) rather than the *charged* date of “possession” (when agents searched the Yu family home in June 2019), no reasonable jury could have found Mr. Yu guilty on Count One based on the evidence at trial. Accordingly, a judgment of acquittal must enter.

3. Trial evidence failed to establish that the design layout and GDS file for an abandoned HMC1022A prototype design constituted or contained any “trade secret.”

The prosecution failed to establish that anything in or about the design layout and GDS file for an abandoned HMC1022A prototype that Mr. Yu allegedly possessed had or retained “independent economic value ... from not being generally known or readily ascertainable.” 18 U.S.C. § 1839(3). Moreover, the evidence showed that layout merely “translated” a legacy design that ADI had previously released to the market and that closely resembled other competitor chips. Therefore, with respect to Count One and regardless of the timing, the prosecution failed to prove unlawful possession of any trade secret.

The prosecution elicited general testimony, from Paul Blount (founder of Custom MMIC), about the potential “utility” of “prototype” designs:

[MS. BECK]: What if a GDS file is of a prototype? Does that still provide utility?

MR. FICK: Objection.

THE COURT: Would you ask the question again?

MS. BECK: Yes, your Honor.

Q. What utility, if any, does a GDS file for a prototype chip provide to a designer?

THE COURT: No, she may have that.

A. So I’m assuming that this is a file where it didn’t become a product, just in development.

MR. FICK: Objection. May we approach?

THE COURT: No. She may have that question. On that assumption, you may answer.

THE WITNESS: Thank you.

A. You would need to know what was wrong with the product in order to really be useful. But it’s – certainly you know that it’s on the way and, therefore, it gives you a significant leg up in starting with that.

5/12/22 Tr. at 128.³ But the prosecution never presented any evidence applying this generic

³ The prosecution also elicited evidence that a prototype which has gone through “the first two or three tapeouts” would “assist in finalizing the final product.” 5/20/22 Tr. at 176 (testimony of Song Lin concerning HMC906A). But there was no evidence concerning any ADI tapeouts of the abandoned HMC1022A prototype.

observation to specific facts in evidence about the HMC1022A prototype design at issue, nor did it establish that Mr. Yu “kn[ew] what was wrong with th[at] product” such that the prototype design might be “really be useful” to him.

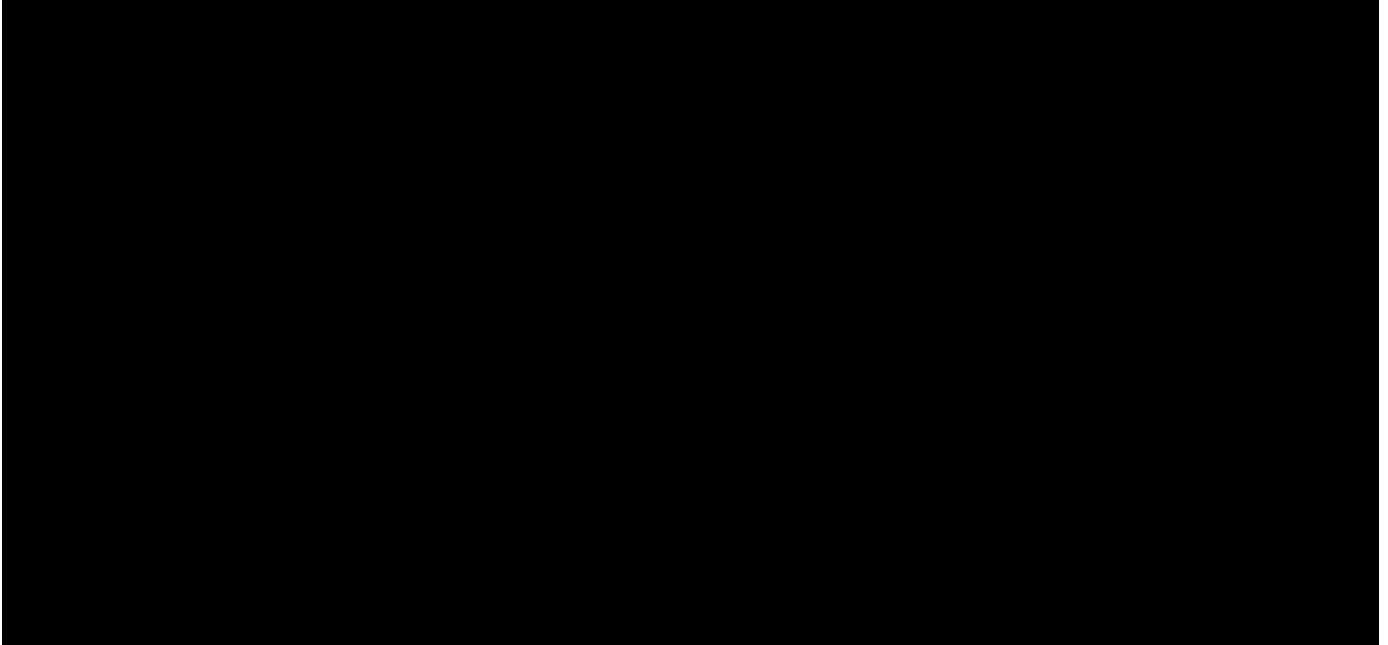
Moreover, according to Blount, the way that a prototype design file could give “a significant leg up” is that it could potentially help to save time and money in development of a similar or competing product. But the considerable effort and expense of developing a finished chip from scratch and the potential savings of time and money from having access to a prototype design file as a “short cut” do not mean that the prototype design itself constitutes or contains any “trade secret,” if the material features of that design are all generally known or readily ascertainable.

Here, the prosecution missed the key point: it failed to elicit any testimony or present other evidence establishing the existence of any valuable “secret” elements or features in the abandoned HMC1022A prototype design. Neither designer of the HMC1022A (identified in Exhibit 1 as Guogong Wang and Mir Faiz) testified at trial, nor did the designer of the legacy HMC1022. Thus, the trial evidence failed to prove beyond a reasonable doubt that a prototype design, much less the particular abandoned HMC1022A prototype design that Mr. Yu allegedly possessed, constitutes or contains any trade secret, that is, something that derives value from the fact of not being generally known or readily ascertainable.⁴

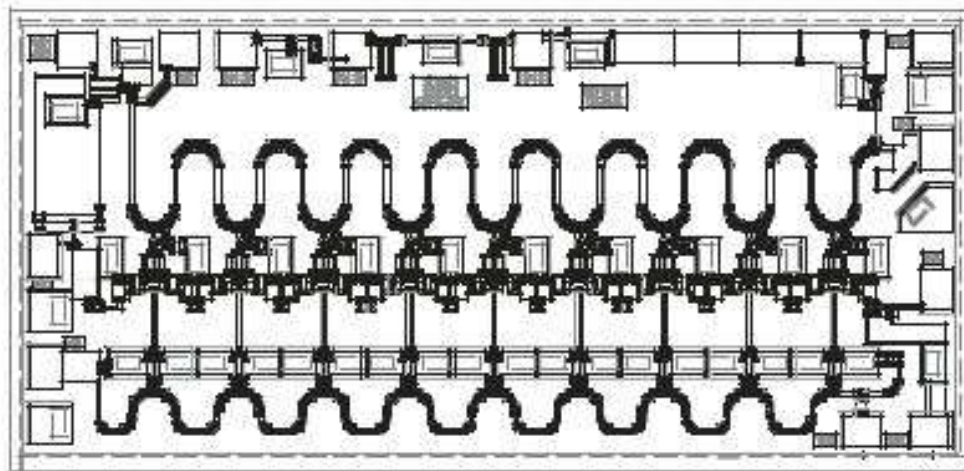
To the contrary, the trial evidence about the HMC1022 and 1022A demonstrate that these

⁴ The verdict also confirms the jury did not find that “prototypes” inherently constitute or contain “trade secrets” by virtue of the fact that the final issued product, which can be physically examined under a microscope, may differ in certain ways from the prototype. Counts Two, Three, Four, Seven, and Eight also involved prototype designs, and the jury acquitted Mr. Yu as to each of them. *See* 5/25/22 Tr. at 51-52 (prosecution pointing out that Counts One, Two, Three, Four, Seven, and Eight all involved prototypes).

products are little more than standard implementations of generally known amplifier architecture, tweaked for different foundry processes. The legacy HMC1022 (Exhibit 338 p.2) was released in or around 2011 and manufactured at the Triquint foundry:

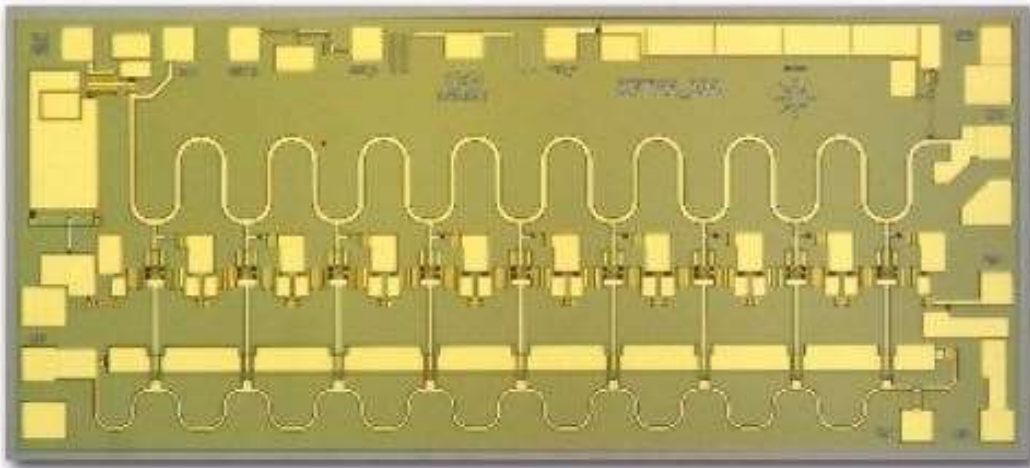


It was apparently based on an earlier, competing Avago (Agilent) design that dates back to 2008 (Exhibit 514 (layout from datasheet published in 2008)):



This basic amplifier architecture is quite literally a “textbook” design; a microscope photograph of the corresponding chip (apparently manufactured at Agilent’s facility in California) is featured

on the “Microwaves 101” educational website⁵:



The bottom line is that the legacy HMC1022 layout, itself very similar to an earlier design from another manufacturer, has been in the public domain for more than a decade. And all of the features of ADI’s chip, like those of its competitors, were readily ascertainable by viewing under a microscope.

John Cowles testified that, after ADI acquitted Hittite, it was forced to redesign certain products, including the HMC1022, to be manufactured at the Win foundry.

Q. So you were trying to move some designs from wherever they were before over to Win?

A. That’s it exactly.

Q. As you were redesigning these Hittite parts for Win, what was your goal?

A. Yes. The goal – normally we make parts better. The goal for these redesigns is to make them exactly the same, as close as possible to what we had.

Q. Why was that your goal?

A. Customers already had the old parts designed and they had it in their various gadgets already. And they would be very upset and inconvenienced, possibly do a lot of work, if we gave them something that was far different from what they already had in their systems.

Q. Okay. And so in this process where you attempted to replicate the chip, but at a new foundry, what did you call that process?

A. We called it a translation.

⁵ <https://www.microwaves101.com/encyclopedias/distributed-amplifiers>

Q. Why did you call it that?

A. It's using the same as we would say for languages. We had to move it from the language of one process to the language of another process, yet still be – have the customer understand it just as well.

Q. So even though you were making the same parts or trying to, you had to redesign them?

A. Yes.

Q. Okay. Was the defendant involved in the translation of Hittite parts?

A. He was.

Q. Okay. And when you translated the parts, did you change their names at all?

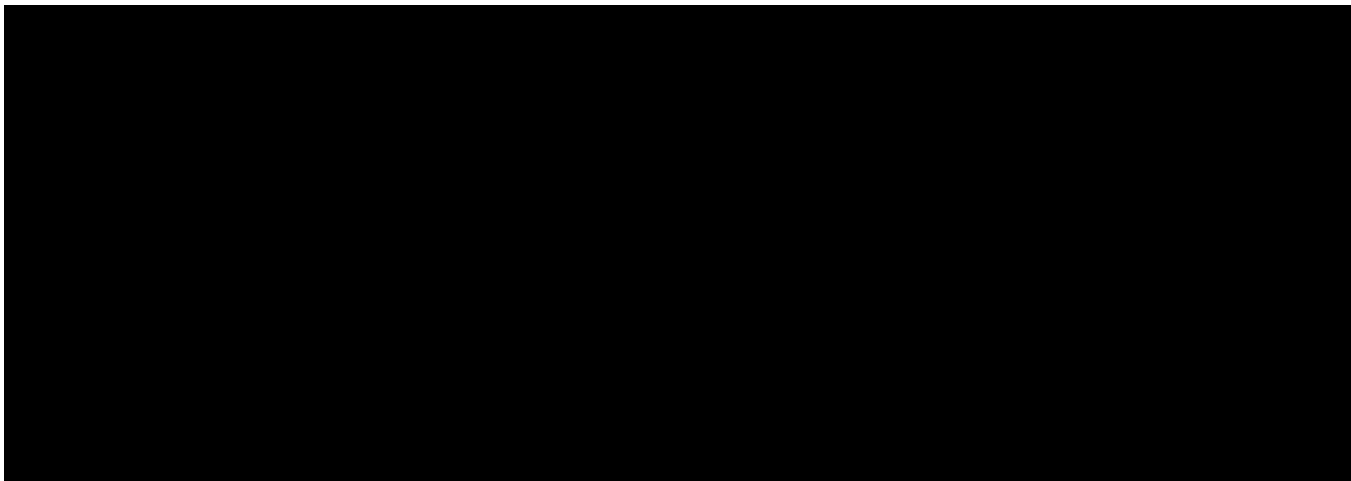
A. Slightly.

....

Q. And when ADI translated these parts, how did they designate that in the name?

A. As we discussed earlier, in order to maintain the history back to the original part, yet still let our customers know that this was not exactly the same thing as before, we added the letter "A" to indicate a translation.

5/5/22 Tr. at 73-74. Not surprisingly, then, since the goal was to design a new chip "exactly the same, or as close as possible" to the old one, the design layout of ADI's early abandoned prototype HMC1022A (below left, Exhibit 335) appears quite similar to the legacy HMC1022 (below right, Exhibit 338 p.2) that it was designed to "translate."



Therefore, it is also no surprise that since the goal of the prototype was simply to "translate" the legacy HMC1022 design to a new foundry and process, not to improve it, no witness identified any feature of the prototype that was a "secret" or even an innovation from the legacy HMC1022

product or its equivalents made by other manufacturers in the market.⁶

Simply put, all the designs at issue amounted to “translations” of the same legacy product based on a generally known amplifier design. The prosecution failed to prove the existence of any “secret” or other feature with independent economic value in the abandoned HMC1022A prototype design (Exhibit 335) that could not be readily ascertained from either the legacy HMC1022 (Exhibit 338 p.2) or the released HMC1022A (Exhibit 339) or both. Accordingly, a judgment of acquittal on Count One should enter.

4. Trial evidence failed to establish that Mr. Yu knew the design layout and GDS file for an abandoned HMC1022A prototype design was a trade secret.

The prosecution failed to present sufficient evidence to prove beyond a reasonable doubt that Mr. Yu knew the design layout and GDS file for an abandoned HMC1022A prototype design was a trade secret. To the contrary, ample evidence established that “reverse engineering” of competitor parts is commonplace in the industry. Additionally, as noted above, the HMC1022 and HMC1022A are simply variations on a generally-known “textbook” amplifier design.

One of Mr. Yu’s first projects at ADI was to reverse engineer a chip from Cree, a competing MMIC design company. *See* 5/5/22 Tr. at 139-142 (Cowles testimony); 5/23/22 Tr. at 12-34 (Lin testimony). As a result, Mr. Yu was keenly aware, from his personal experience as an ADI employee, that the important features of MMICs were readily ascertainable from physical examination of actual chips.

⁶ It is also no surprise that Tricon’s designs, TM5051 and TM5052, closely resembled both the legacy HMC1022 and the abandoned HMC1022A prototype in various respects. But critically, the Tricon designs were also different, as reflected in the XOR comparison exhibits, due to both designer preferences and, as multiple witnesses testified, because Tricon used an older PDK and process at Win that ADI did not use.

Even if Mr. Yu may have believed that it was improper or a breach of his employment agreement to retain proprietary files or information from ADI, he had no reason to think those materials might contain trade secrets, particularly in connection with a legacy product based on “textbook” design principles such as the HMC1022 and its “translation” to the HMC1022A.⁷ Put another way, the prosecution presented no evidence at trial that Mr. Yu knew such files were “trade secrets” of ADI. Without such guilty knowledge, there could have been no criminal possession of a trade secret. Thus, a judgment of acquittal on Count One should enter.

5. Trial evidence failed to establish that Mr. Yu intended to injure ADI or knew he would injure ADI by possessing the design layout and GDS file for an abandoned HMC1022A prototype design.

The trial evidence failed to prove that Mr. Yu specifically intended to injure or knew he would injure ADI by possessing a design layout and GDS file of an abandoned HMC1022A prototype design. Indeed, there was no evidence that ADI suffered any actual injury, at all, from Mr. Yu’s possession of the alleged “trade secret” identified in Count One. And the evidence established that Mr. Yu did not try to compete with ADI for buyers who wanted the highest end, most exhaustively tested products. He was trying to create products that would be just “good enough,” the aim of generic product manufacturers across many industries. His sales of TM5051 and TM5052 (the products related to the HMC1022 and HMC1022A) did not even rise to the level of a rounding error for ADI, a company with over \$7 billion in annual revenue. *See* Exhibits 160, 389 (showing total sales of 50 units of TM5051 and 2 units of TM 5052 for a gross total of \$6,300

⁷ Indeed, ADI’s own internal “Information Classification Policy,” Exhibit 276, treats “[i]ntegrated] C[ircuit] schematics” and “layouts” as “Internal Company-wide Access” information, which, if it “found its way into the public domain or the hands of a competitor it would not damage the company.” *Id.* at 2-3. And while “Product CAD data” and “[i]ntegrated] C[ircuit] Tape-out mask data” are treated as “Confidential Limited Access” information, ADI does not classify such material as “Trade secret information,” which has its own separate, heightened “Secret Need to Know” category. *Id.* at 2.

over two years, which is 0.00009 percent of ADI's annual revenue). Mr. Yu was not trying to hurt ADI, nor could he have done so.

There was ample evidence that Mr. Yu intended to develop and sell Tricon products, TM5051 and TM5052, that could replace the obsolete, legacy HMC1022, which ADI no longer manufactured or sold. But the requisite intent to injure ADI is a separate element from intent to benefit someone other than the owner of the trade secret. *See* 18 U.S.C. § 1832 (using conjunctive to enumerate “economic benefit of anyone other than the owner” and “intending or knowing that the offense will injure any owner” as separate elements); 1st Cir. Pattern Jury Instructions § 4.18.1832 (listing “benefit” and “injury” as separate elements).

Moreover, whatever intent Mr. Yu might have had at some earlier time, no evidence established that, as of the alleged date of the charged offense on or about June 14, 2019, he still possessed a design layout and GDS file for an abandoned HMC1022A prototype design with the intent, *at that time*, to injure ADI, since both ADI and Tricon had already released their relevant products at that juncture. By June 2019, the abandoned prototype HMC1022A design layout and GDS file was of no present or future use to Mr. Yu for any purpose, and his possession of it did not cause or threaten any injury to ADI. Accordingly, a judgment of acquittal on Count One should enter.

II. Alternatively, A New Trial is Required on Count One.

Should Count One somehow survive despite the insufficient evidence at trial, the Court should, nevertheless, order a new trial in the interest of justice due to certain deficiencies in the Court's jury instructions and the prosecution's misleading closing argument.

A. Legal Standard

This Court “may vacate any judgment and grant a new trial if the interest of justice so requires.” Fed. R. Crim. P. 33. A motion for new trial is directed to “the broad discretion” of the

trial court. *United States v. Indelicato*, 611 F.2d 376, 387 (1st Cir. 1979); see *United States v. Wilkerson*, 251 F.3d 273, 278 (1st Cir. 2001). Accordingly, the power to order a new trial is “broader” than the power to direct an acquittal. *United States v. Rothrock*, 806 F.2d 318, 321 (1st Cir. 1986). “The ultimate test on a Rule 33 motion is whether letting a guilty verdict stand would be a manifest injustice.” *United States v. Ferguson*, 246 F.3d 129, 134 (2d Cir. 2001). Even if a court finds individual trial errors harmless, it must grant a new trial if their “aggregate” effect denied the defendant a fair trial. *United States v. Sepulveda*, 15 F.3d 1161, 1195-96 (1st Cir. 1993).

B. Argument

1. Deficiencies in the Court’s jury instructions warrant a new trial.

The Court erroneously declined to modify or correct its jury instructions in two ways that likely influenced the verdict.

First, with regard to dates alleged in the indictment, the Court stated:

And the government does—they don’t have to prove particular dates at all, but in the charge they’ve got to let the person who they’re charging know that on or about particular dates, um, the offense was taking place, was committed.

5/25/22 Tr. at 21. The defense objected:

With respect to the trade secret charges, your Honor, um, I think you said that the dates, they are primarily for notice to the defendant as indicated in the indictment. With respect to the unlawful possession charges, we actually think the dates are critical and controversial on particular dates, he may or may not have possessed something or whether they were [trade secrets]—so we think it’s important.

5/25/22 Tr. at 38. The Court responded, “I’m not going to say anything more, but you may argue it.” *Id.*

Respectfully, the Court’s instruction, in particular the statement that prosecutors “don’t have to prove particular dates at all,” was erroneous and prejudicial. As explained above, at a minimum, the Court should have instructed the jury that to convict Mr. Yu, the prosecution had

the burden to prove that the alleged crime occurred “within a reasonable time” of the date alleged in the indictment.

Moreover, the *specific* date was material in this case, because as of the charged date, June 14, 2019, possession of the charged design layout and GDS file could not have constituted a trade secret offense. Even if the information constituted a trade secret at some earlier time (which Mr. Yu disputes), by June 14, 2019, ADI had released the actual HMC1022A chip, and as a result, its design layout and critical features were, as of the charged date, readily ascertainable by proper means to anyone who bought the chip and examined it under a microscope.

Second, the defense asked the Court to instruct the jury that, to establish Mr. Yu intended to injure ADI, or knew that his conduct would do so, the prosecution “must prove that Mr. Yu intended some injury to ADI that was different or distinct from an intended benefit to himself, Tricon, or any other entity.” D.E. 232 at 2. The Court erroneously declined to give this instruction. 5/25/22 Tr. at 39. The Court then compounded that error by instructing, in response to a jury question on the meaning of “injury,” among other terms: “Injury could, I leave it to you, be an injury because who would get first to market, any sort of competitive injury because matters could be disclosed to other competitors, um, Mr. Yu could make use of the trade secret for his own monetary advantage to the detriment of ADI.” 5/26/22 Tr. at 8.

In giving this “injury” instruction, the Court erroneously conflated the fourth element (benefit to someone other than ADI) and fifth element (injury to ADI). Given the jury’s interest in the issue and the weakness of the prosecution’s evidence that Mr. Yu intended to “injure” ADI, the significance of the error looms large.

Because these deficiencies in the Court's instructions likely influenced the verdict, they were not harmless, and the Court should order a new trial. *See United States v. Godin*, 534 F.3d 51, 60 (1st Cir. 2008).

2. The prosecution's misleading closing argument warrants a new trial.

As detailed above, the prosecution misled the jury by arguing in its closing that it should find Mr. Yu guilty because he "stole" chip designs when he left ADI in July 2017 and before the corresponding products were publicly available. *See* 5/25/22 Tr. at 51. That improper argument likely caused the jury to focus erroneously on the timing of supposed theft in or before July 2017, even though Mr. Yu was only charged with unlawfully possessing the design layout and GDS file for the HMC1022A in June 2019, four months after ADI had released the product for sale, at a time when there could be no trade secret because the layout and features of the product were readily ascertainable. Thus, the prosecution's misstatements "prejudiced the outcome of the case, warranting a new trial." *United States v. Azubike*, 504 F.3d 30, 39 (1st Cir. 2007).

Conclusion

For the foregoing reasons, a judgment of acquittal must enter on Count One or, alternatively, this Court should vacate Mr. Yu's conviction and order a new trial.

Respectfully submitted,

HAOYANG YU

by his attorneys,

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CERTIFICATE OF SERVICE

I hereby certify that this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants on June 23, 2022.

/s/ William W. Fick