

In The
United States Court of Appeals
For The Federal Circuit

PEI-HERNG HOR,

Plaintiff – Appellant,

and

RULING MENG,

Plaintiff – Appellant,

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

DEC 21 2011

JAN HORBALY
CLERK

v.

CHING-WU “PAUL” CHU,

Defendant – Appellee.

**APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
IN CASE NO. 08-CV-3584, JUDGE KEITH P. ELLISON.**

BRIEF OF APPELLEE

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Dated: December 21, 2011

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Hor _____ v. Chu _____

No. 11-1540

AMENDED CERTIFICATE OF INTEREST

Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party)
Ching-Wu "Paul" Chu _____ certifies the following (use "None" if applicable; use extra sheets
if necessary):

1. The full name of every party or amicus represented by me is:

Ching-Wu "Paul" Chu

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THE FEDERAL CIRCUIT

SEP 28 2011

IAN HORBALY

CLERK

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

While the real party in interest is Chu, Chu is an employee of the University of Houston, which is the owner of the patents to which Appellants claim co-inventorship.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None

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

Akin Gump Strauss Hauer & Feld LLP - Lester L. Hewitt; Rehan M. Safiullah

September 20, 2011

Date



Signature of counsel

Rehan M. Safiullah

Printed name of counsel

Please Note: All questions must be answered

cc: Brent C. Perry; Joe A. Beverly



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**GLOSSARY
TO
DEFENDANT CHU'S MOTIONS FOR SUMMARY JUDGMENT ON
LACHES AND CORROBORATION**

Ba	Barium
Cu	Copper
Dy	Dysprosium
Er	Erbium
Eu	Europium
Gd	Gadolinium
Ho	Holmium
K	Degrees Kelvin
La	Lanthanum
LBCO	Lanthanum-Barium-Copper-Oxide (La-Ba-Cu-O)
Lu	Lutetium
Nd	Neodymium
O	Oxygen
Pr	Praseodymium
Sc	Scandium
Sm	Samarium
Sr	Strontium
T _c	The transition temperature: the critical temperature at which a superconducting material exhibits a near total loss of electrical resistance
Tm	Thulium
USPTO	United States Patent and Trademark Office
Y	Yttrium
Yb	Ytterbium
YBCO	Yttrium-Barium-Copper-Oxide (Y-Ba-Cu-O)
123	The atomic ratio of Y ₁ B ₂ Cu ₃ O determined by Robert Hazen and David Mao of the National Geophysical Lab
214	The atomic ratio of the superconducting phase in Bednorz and Müller's 555 sample as determined in early December by Kitazawa—(La _x Ba _{1-x}) ₂ Cu ₁ O ₄
555	The atomic ratio found in Bednorz and Müller's paper of (Ba _x La _{5-x})Cu ₅ O ₅

I. STATEMENT OF RELATED CASES

No case is known to counsel to be pending in this or any other Court that will directly affect or be directly affected by this Court's decision in the pending appeal.

II. JURISDICTIONAL STATEMENT

Appellee Chu agrees with the statements of jurisdiction of Appellants Hor and Meng.

III. STATEMENT OF ISSUES

Appellee Chu agrees in principle with the Statements of the Issues by Pei-Heng Hor ("Hor") and Ruling Meng ("Meng"), except as refined below.

Issue No. 1

Whether the district correctly held that the period of delay for laches begins from a date when Hor and Meng knew or should have known of their claims for inventorship, even if prior to patent issuance.

Issue No. 2

Whether the district court abused its discretion in holding that Hor and Meng's unreasonable delay caused prejudice to Chu.

Issue No. 3

Whether the district court abused its discretion in holding that Hor and Meng's claims for inventorship were barred by equitable estoppel.

Whether the district court abused its discretion in dismissing Meng's "unclean hands" defense.

IV. STATEMENTS OF CASE, ORAL ARGUMENT AND CONFIDENTIALITY

Appellee Chu agrees in principle with the Statements of Case by Hor and Meng. Chu further agrees with Hor's Statements Regarding Oral Argument and Confidentiality.

V. STATEMENT OF FACTS, NOVEMBER 1986-MARCH 1987

A. Introduction

This case involves an inventorship dispute regarding two patents directed to the field of high temperature superconductivity. The experimentation took place from November 1986 through March 1987, but the two patents in issue did not issue until June 6, 2006 and May 5, 2010, respectively. A611-627, 195-214.

Defendant, Dr. Ching-Wu ("Paul") Chu, has been a recognized leader in superconductivity research since at least 1980. In 1986, Chu was a Professor of Physics and in charge of the research laboratory on superconductive materials at the University of Houston ("UH"). A2435. In September 1986, Chu began serving a one-year term as Director, Solid State Physics Program, National Science Foundation ("NSF"). *Id.*

While at NSF from about September 1986 to August 1987, Chu retained one-half time status at UH. A2434. Chu returned to Houston some full weeks and most weekends and called Meng “every four hour, maybe twice a day, all talking about, you know, what is the next step, what is the result, what shall we do?” A1328–1329, 2000-2002.

As of October 1986, Hor was thinking about his doctorate dissertation¹ (A2447-2448), and Meng, as one of the lab’s material scientists, was preparing samples for Chu. A2108. While NSF was a full-time position for Chu, a breakthrough by scientists Bednorz and Müller came to his attention when he returned to the UH lab in early November 1986. This began a five-month period from November 1986-March 1987 of intense research and discovery leading to new developments of oxide superconductors which were superconductive above 77°K. Chu filed multiple patent applications and wrote scientific papers chronicling each discovery during this critical period. In 1987 or 1988,² Chu, Hor, Meng, and UH outside IP attorney Charles M. Cox met (“Cox Meeting”) to discuss

¹ Contrary to Hor Br. at 1, Hor has not authored over 200 papers, rather he is listed as a co-author. There is no evidence that he wrote or revised any of the Chu papers written in the critical period.

² So much time has passed that even the year of the Cox, Hor, Meng, and Chu meeting is unknown. This meeting could have occurred after August 14, 1990, the date the *Wu v. Chu* interference was declared. A2327–2330. Because Hor and Meng approximate the meeting to be in either 1987 or 1988, Chu will refer to those dates.

who first formed the concept of an Yttrium (Y) substitution, a discussion which may have been prompted by the USPTO declaring an interference between Wu (Univ. of Alabama) and Chu (UH, who was the assignee of Chu's patent application). During that meeting, Chu suggested to Cox that Hor and Meng should also be inventors; in response, Cox disagreed, stating that both were a pair of hands. When Hor heard this, he rushed out of the room, and Chu went out to tell Hor he would talk to Cox. A2228. No one ever told Hor or Meng that they were inventors.

Meng submitted two declarations and provided deposition testimony in 1993 in support of Chu's conception of Y. In the following years, other interferences were filed contesting the priority and inventorship of Chu's patent applications, which contributed to a prolonged pendency of the applications until issuance in 2006 and 2010.

In 2006, for the first time, Hor and Meng inquired of UH if they were listed inventors. When promptly told they were not, Hor and Meng informally made claims to UH. Hor then sued under 35 U.S.C. § 256 on December 5, 2008. A58-71. Meng intervened on May 13, 2010. A98-103.

Hor and Meng have devoted much of their briefs to the inventorship issue, which is not relevant to laches, estoppel, or unclean hands. Nonetheless, Chu will respond.

B. November 1986, The Bednorz and Müller Paper

In early November 1986, upon returning to his UH office, Chu reviewed a paper written by J.G. Bednorz and K.A. Müller (“Bednorz Paper”), which related to the discovery of relatively high temperature superconductivity using a Lanthanum-Barium-Copper-Oxide (La-Ba-Cu-O) chemical composition. A629–633. Chu determined that the solid-state reaction method should be used to first duplicate the compositions and then seek to improve superconductive temperature (T_c) attained by Bednorz and Müller. Meng contends it was her idea to use solid-state reaction rather than Chu’s, but she admitted in her deposition that the Bednorz Paper actually utilized solid-state reactions except for the first step. A630, 2113. Further, Chu had utilized the solid-state methods in his lab for many years. Confidential Appendix A2453. A1051. As for Hor, he did not do anything in particular upon receipt of the paper. A2214.

The Bednorz Paper utilized a “nominal”³ 5-5-5 in their La-Ba-Cu-O system, so the first step taken by Chu’s lab was to duplicate those results. The new 5-5-5 samples were subjected to physical pressure, a technique pioneered by Chu. A1053, n.12, A667, n.3. Chu then initiated using “chemical pressure” to mimic physical pressure, substituting the smaller atoms of Strontium (Sr) and Calcium

³ “Nominal” refers to the atomic formulas for mole fractions of chemical elements combined. After typical processing, the final samples normally contain multiple phases having different atomic formulas.

(Ca) for the larger Barium (Ba) atom. Confidential Appendix A2250. In early December, Chu enlisted Dr. M.K. Wu of the Univ. of Alabama, a former student of Chu's, to perform the Sr experiments in La-Sr-Cu-O compounds. A1053, 1306–1307. Beginning later in December 1986, the UH group initiated experiments using a nominal “2-1-4” $(La_xBa_{1-x})_2Cu_1O_4$ based upon work done by K. Kitazawa, a professional acquaintance of Chu's. A1053.

C. Mid-December 1986, Chu's Conception of the Y Substitution

In mid-December 1986, apart from substituting atoms for Ba, Chu also conceived the idea of substituting Y and Lutetium (Lu) for the larger Lanthanum (La) atom and disclosed his ideas to Meng by telephone. A1310-1311, 279, 1439. This was confirmed by Meng in her Declarations of December 4, 1990 (A1439-1441, ¶ 2), and February 22, 1993 (A275-285, ¶¶ 8-9), and her deposition of April 29, 1993, in the *Wu v. Chu* Interference. A1282, 1310–1311. In 2006, however, Meng disavowed her “lies” corroborating the phone call with Chu. A1210–1211.

Chu's personal calendar shows the following entries in December:

Dec. 18 – “complete replacement of La by smaller Y. Yb. Lu...”

Dec. 19 – “No Y...”

Dec. 26 – “Y Lu have to work”

A1266, 2316–2317.

Though not present, Chu agrees that in early January 1987, in a meeting with Wu of the Univ. of Alabama in Houston, Hor likely suggested to substitute Y for La, the same idea Chu had already discussed with Meng in mid-December. All three recall instructing Wu to proceed with Y experiments. Confidential Appendix A2250. A2157, 2220.

D. January 1987, Chu's Patent Disclosure

In a patent disclosure dated January 9, 1987, Chu described a range of superconducting formulas, including the substitution of Y or Lu for La, and the substitution of Sr, Ca, or Magnesium (Mg) for Ba. Confidential Appendix A2312–2314. This patent disclosure was reduced to practice in Chu's first U.S. patent application filed January 12, 1987.⁴ A635–663.

Chu made the decision to have ordered not only Y, but many of the rare earths in January 1987.⁵ A1270, 2372. Hor claims that the Y substitution was likely his idea because Meng would have ordered Y earlier than January 12 if Chu had disclosed Y, Ytterbium (Yb), and Lu in mid-December to Meng (Hor Br. at 4, n.3). But Chu's calendar entry of December 19 notes "No Y...", which strongly

⁴ The claims of the patent application include 2-1-4 with the range of its Y-Ba-Cu-O formulas, and thus included the sample later made by Wu.

⁵ The orders in early January 1987 are significant because they evidence that someone, very likely Chu, was contemplating use of the magnetic rare earths in addition to the non-magnetic rare earths Y and Lu.

suggests that Chu had already asked Meng if UH had Y. A1266, 2316. At most, Hor independently conceived the same Y substitution as Chu, but weeks later.

The order of January 12, 1986 [*sic*, 1987], shows that in addition to Y, Chu's group also ordered Lu, Cerium (Ce), and Gadolinium (Gd). A1270, 2373. On January 17, Chu's group ordered magnetic rare-earths⁶—Neodymium (Nd), Europium (Eu), Erbium (Er), and Yb. A2373. Hor admitted that he was completely unaware of these orders. A2221. Meng did not recall considering Yb at the time even though it was ordered. Yb was listed on Chu's calendar in mid-December. A2128.

Thus, based on Chu's calendar, the patent disclosure dated January 9 (Confidential Appendix A2312–2314), and patent application filed January 12 (A635–663), the instruction to order Y and the other rare earths more likely came from Chu, not Hor or Meng. Had Hor and Meng made their inventorship claims much earlier, perhaps one of them or Chu could recall more accurately.

⁶ According to the Periodic Table, the following elements are considered rare earths (lanthanoids): Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu. A2374.

E. January 29, 1987, The First YBCO Superconductor

The first YBCO nominal 214 sample that exhibited a $T_c > 77^\circ\text{K}$ was actually made by Wu at the Univ. of Alabama and brought to Chu for review and study.⁷ After testing and confirming performance through additional samples, Chu prepared and submitted a new paper to Physical Review Letters on February 6, 1987. A665–667. Hor attempts to rely on the fact that he is listed as the first author to support his claim that the conception of Y must have been his idea. A665–667. Confidential Appendix A2252–2253. However, it was Chu’s practice to list himself first in an initial article on a new trend but to then list others first on subsequent articles involving the same subject matter. A1993–1994. Hor cited Dr. Hazen of the Carnegie Institute of National Geophysical Laboratory (“NGL”) for the proposition that typically, the first author is the person who most directly contributed, but Hazen also stated that “[t]he last author is very typically the senior person who has, in one way or another, initiated the project and has led the scientific team.” A2199. While Hazen listed Chu first, it was Chu who asked Hazen to list his name last. A2199, 2091.

⁷ It was the contention of UH in the *Wu v. Chu* Patent Interference that Wu derived the concept of Y from Hor. On February 24, 1999, the Board of Patent Appeals and Interferences found that Wu could not make the count and thus could not antedate the February 6, 1987, Chu patent application. A931, 943–946.

F. February-March 1987, Determination of Superconducting Phase and Formula of YBCO

Hor and Meng overstate their contribution to the determination of whether the black or green phase of the new 214 YBCO material was the superconducting phase. Hor and Meng also claim responsibility for determining that the chemical composition of the black phase was “123” ($Y_1Ba_2C_3O$), which they admit was ultimately determined by NGL. In a paper submitted on February 6, 1987, Chu noted that under an optical microscope, black and green phases were clearly evident. A262. On February 20, 1987, Chu delivered to Dr. Mao of the NGL a first YBCO sample, which was passed on to Dr. Hazen of NGL to determine the composition and crystal structure of the superconducting phase or phases. A2186-2187. To Hazen it was obvious that there were two phases in the sample—black and green. A2188–2189. From the beginning Hazen thought that the black phase was the superconducting phase. A2189. Hor admitted it was “common sense” to conclude that the black phase was superconducting and green phase was not. A2222. At best, “Paul’s group” merely confirmed the reasonable assumption that the black phase was superconductive. A2195.

On February 27, NGL determined that the superconducting black phase was 123 ($Y_1Ba_2Cu_3O$). A2193–2194. Hazen notified Chu of the results that very day. A2194. And Chu notified Meng the next day. A2147-2148. Hazen provided Chu with the crystalline structure of the 123 black phase on March 5, 1987. A2090.

Hazen testified that NGL determined virtually everything from the first sample but did use the second sample to determine the positions of the oxygen atoms. A2197–2198. Meng and/or Hor did work to synthesize this second sample, but erroneously state that their efforts on the second sample led to the determination of the phase, 123 formula, or structure—none was the case. A243, 2197.

G. January-March 1987, The Magnetic Rare Earths

In his 2010 Declaration, Hor claims conception of complete substitution of magnetic rare earths⁸ for Y (a non-magnetic rare earth) on about March 11 or 12, 1987, after NGL had determined that the black superconducting phase was 123. A564.⁹ Hor allegedly asked Meng to substitute the magnetic rare earth Gd for Y in YBCO 123. A564, 1674–1675, 2125. Because Gd was found to not suppress superconductivity, Hor claims he asked Meng to substitute the other magnetic rare earths for Y, but Meng’s testimony was that Hor only suggested Gd. A2151. She did not recall if Hor said to continue to experiment with other rare earth substitutions or not. A2151. She thought that Chu might have told her to do the rest. A2151.

⁸ The presence of magnetic atoms in materials typically suppresses superconductivity. A2021. Confidential Appendix A2268.

⁹ Hor’s 2006 Affidavit states he told Meng to substitute Gd for Y in mid-February (A219), which was his “wild idea.”

Hor's testimony is completely inconsistent with the evidence and Meng, for her part, remembers little. These rare earths were initially ordered in January 1987, but Hor knew nothing about it. A2221. Moreover, Chu had already begun the doping or partial substitution of rare earths in late February even before the 123 chemical composition was known. In lab notebook entry of February 27, 1986 [*sic*, 1987], Meng had written down partial substitutions of 0.01 and 0.05 with Y for all the magnetic rare earths, so Chu was well ahead of Hor once again. A1476, 1479. After first claiming she did not remember, Meng then said "probably yes" that Chu discussed with her running a series of tests using partial substitutions of the rare earths. A2147. Further, referring to a lab record dated February 28, 1987 (A1479), Meng states that Chu gave her instructions about rare earth doping, answering: "[B]ut definitely he talked to me about rare earth, other element doping in this conversation." A2148. This was well before Hor's alleged date of conception on about March 12.

H. Patents in Dispute, Related Publications, and Interferences

(1) Patent applications filed between January 12 and March 26, 1987 and Issued Patents. See A2315.

- January 12, 1987, First Chu patent application filed, Serial No. 07/002,089, A635-663.
- January 27, 1987, Continuation-in-Part, Serial No. 07/006,991, A753-792.

- February 6, 1987, Continuation-in-Part, Serial No. 07/012,205, A794–838.
- March 26, 1987, Continuation-in-Part, Serial No. 07/032,041 (A672–716). Issued as U.S. Patent No. 7,056,866 on June 6, 2006. A611–627.
- January 23, 1989, Continuation of February 6, 1987 Application, Serial No. 07/300,063 (A2375–2426). Issued as U.S. Patent No. 7,709,418 on May 4, 2010. A195–214.

(2) Chu Scientific Publications During Development Period, Which Refer to Chu Patent Applications.

- “Superconductivity at 93K in a New Mixed-Phase Y-Ba-Cu-O Compound System at Ambient Pressure,” *Physical Review Letters*, Vol. 58, No. 9, pp. 908-910 (Mar. 2, 1987) (received Feb. 6, 1987). A665–667.
- “High-Pressure Study of the New Y-Ba-Cu-O Superconducting Compound System,” *Physical Review Letters*, Vol. 58, No. 9, pp. 911-912 (Mar. 2, 1987) (received Feb. 6, 1987). A262–263.
- “Superconductivity Above 90 K in the New $\text{ABa}_2\text{Cu}_3\text{O}_{6+x}$ System”, *Proceedings of Symposium S at the 1987 Spring Meeting of the Materials Research Society (MRS) on High Temperature Superconductors (Extended Abstracts)*, pp. 15-17. (Apr. 21, 1987). A1977–1979.

(3) The Interferences, 1988-2000.

- *Qadri v. Chu*, Interference #101,981 (re: U.S. Patent Serial No. 07/032,041). Notice of Interference dated Sept. 16, 1988; Judgment entered Nov. 9, 1990. Appeal filed Mar. 4, 1991; Judgment entered Apr. 7, 1992.
- *Wu v. Chu*, Interference #102,447 (re: U.S. Patent Serial No. 07/300,063). Notice of Interference dated Aug. 14, 1990; Final Decision entered Feb. 24, 1999; Final Judgment entered Dec. 8, 2000.

VI. STATEMENT OF FACTS – LACHES AND ESTOPPEL

A. Hor and Meng Knew Before 1990 That Attorney Cox Did Not Consider Them Inventors

In January 2006, upon asking, Hor and Meng were immediately told by John Warren, UH Vice President of Intellectual Property, that neither was listed as an inventor. A567, 244. Contrary to their assertions, Hor and Meng had no reason to believe they were inventors based on events about eighteen years earlier. In his 2006 Affidavit and elsewhere, Hor describes the meeting involving Hor, Chu, Meng, and UH outside IP attorney Charles M. Cox in 1987 or 1988 (“Cox Meeting”) in which Cox said, in response to Chu’s statement that Hor and Meng should also be inventors: “No, no, no! Not everyone can be an inventor. A pair of hands cannot be considered an inventor.” A221. “Disturbed by this comment,” Hor left the room. A221. Chu followed him and according to Chu, told Hor that he would “talk” to Cox. Confidential Appendix A2278.

According to Hor in his 2006 affidavit, Chu said he would “straighten things out,” but in his subsequent deposition, Hor testified that Chu said he would “talk to Charles Cox,” and Hor “consider[ed]” that Chu would “straighten” things out. Compare A221 to A2228. While Meng claims that Chu suggested she and Hor should be inventors after Cox’s pair of hands statement (Hor Br. at 7), Hor admits Chu’s statement preceded Cox’s pair of hands statement. A2228, 221. Even

though Hor and Meng knew Cox's strongly stated opinion, they never followed up until January 2006.

Hor argues that it was unclear as to whom Cox was referring to as a pair of hands or that Hor did not understand what that meant (Hor Br. at 12, n.8), even though it was Chu's comment that Hor and Meng should be included as inventors that prompted Cox's response. There can be no question that Hor understood what Cox meant and to whom it was directed. He took umbrage because Cox said that Hor and Meng were not inventors because "a pair of hands cannot be considered an inventor." A221. Hor tries to rebut that inescapable conclusion with his statement in his 2010 Affidavit (his second affidavit since the dispute arose in January 2006) that he "considered the term 'pair of hands' to be very insulting." A566-567. This was a refinement of his statement in his first post-dispute affidavit (A221), and of his deposition answer, where he testified that Cox's statement that "a pair of hands should not be an inventor" was the statement he considered insulting. A2228.

Meng also clearly understood Cox's statement: "Pair of hands just you do something—people ask, you do it. You don't have the idea." A2171. Meng also never asked anyone if she was listed as an inventor until 2006, though she clearly understood what Cox said. A2146, 2180-2181. This evidence should be

undisputed, and demonstrates that as of the Cox Meeting in 1987 or 1988 at the latest, Hor and Meng knew they were not considered inventors by Cox.

B. Knowledge of Chu's Patent Applications

As early as January-March 1987, Hor and Meng had to have known that UH (through Chu) had filed at least one patent application on the high temperature superconductors. This knowledge should have driven them to request a copy, or at least inquire about inventorship even prior to the Cox Meeting.

1. Hor Knew of a Patent Application at Least as Early as 1990—If Not Earlier

First, Hor had to know of the patent filings because they were described in numerous articles that appeared in national and local newspapers in 1987-1989. A840-852. Second, two of the scientific papers submitted by Chu on February 6, 1987, and published on March 2, 1987, referenced the filing of the patent application as "C. W. Chu, U.S. Patent Application (12 January 1987)" in the footnotes. A667, n.1, A263, n.12. A similar reference is in a third paper produced by Hor. A1977-1979, n.7. Hor knew or should have known that Chu had filed a patent application because he personally reviewed each paper prepared by Chu. A2224-2225.

In his deposition, Hor admitted that as of December 1990, he understood that UH had a patent application on file in the PTO, and that the Univ. of Alabama

was challenging the right of UH to get patent rights because of the interferences.
A2219.

Even though Hor claims he had no working knowledge of patents, by 1990 he knew from the Cox Meeting that Cox did not consider him an inventor, and that Chu had already filed at least one patent application during the development period. Hor should have asked if Cox had changed his opinion or followed up in some way—he never did.

2. Meng Admits She Knew of a Patent Application in 1987

In her deposition, Meng admitted she knew about a patent application as early as late 1986 because “Dr. Chu mentioned to me many times our patent.”
A2118, 2138–2139.

During the *Wu v. Chu* Interference, Meng testified, “I remember I had saw one patent application, but I’m not sure which was end of the ’86, but I couldn’t remember exactly.” A1370–1371. In Meng’s 1989 Declaration during the *Qadri v. Chu* Interference, Meng stated, “I have read and am familiar with the contents of United States Application Serial No. 32,041, filed March 26, 1987 by C. W. Chu (hereafter the ‘Chu Application’).” A266. On the cover page, the application lists Chu as the sole inventor (A672), and on page 1, Chu is named the sole inventor: “Inventor: Ching-Wu Chu.” A673. Although Meng executed this declaration, which stated she read the ’041 Patent Application, she now claims she did not

know Chu was the sole inventor, and never reviewed any patent application.

A2118, Meng Br. at 9. Like Hor, Meng also stated she reviewed the papers written by Chu prior to and after publication, and likely reviewed many of the numerous newspaper articles. A2139, 840-852. Thus, she would have reviewed the two important papers written by Chu and published March 2, 1987, that referenced the patent application of January 12, 1987, in a footnote. A667, n.1, A263, n.12.

Meng never asked anyone about patent inventorship before 2006. A2118. She seeks to excuse her lack of inquiry based on Chu's references to "our patent," but conceded that Chu never told her she was an inventor. A2118, 2178.

C. The *Wu v. Chu* Interference

The draft Chu declaration referred to by Hor has consistently been the subject of a claim of attorney-client privilege such that Chu would risk loss of attorney-client privilege if he responds in any way. Confidential Appendix A2295–2300.¹⁰ Hor accuses Chu of "almost completely" erasing Hor from the picture (Hor Br. at 13), even though Hor knew from the Cox Meeting that Chu considered himself to have conceived the Y substitution. A221. Support for Chu's conception is found in the corroborating Declarations of Meng (A1439-1441, ¶ 2, A275-285, ¶¶ 8-9), and in her deposition in the *Wu v. Chu* interference (A1310-1311), which

¹⁰ This document was produced by Hor in this litigation (PH1614-1619). Hor had no authority to remove it from UH files. In spite of UH's claim of privilege, Hor and Meng's attorneys have used the document.

Meng now recants. As to removing reference to Hor from his declaration, Chu only removed reference to Hor being in the mid-December telephone call between Chu and Meng. No one disputes that Hor was not on that call.

D. UH Investigation and Hor Grievance

The statement made by Lester Hewitt to the PTO that UH would make a fair and complete investigation was accurate. The fact that the district court granted summary judgment vindicates UH's refusal to accede to Hor and Meng's claims of inventorship after its investigation.

VII. SUMMARY OF ARGUMENT

Hor and Meng's principal defense to laches is their self-serving belief until January 2006 that they were listed as inventors. The facts negate those contentions. Additionally, they argue that, even though a claimant under 35 U.S.C. § 256 for inventorship must rely on events relating to invention development which occurred before the application was even filed, the claimant should be free to reach back in time for decades with impunity. In contrast, Chu argued and the district court held that for § 256 claims, the equitable doctrines of laches and estoppel must be available to prevent inventorship claims brought long after memories fade to the prejudice of the patent holder.

Hor argues that for laches to apply to inventorship claims made before the patent issues, § 256, and 37 C.F.R. § 1.324 must specify a diligence requirement.

Yet, the district court's opinion was not based on a statutory or regulatory diligence requirement, but rather on the equitable laws of laches and estoppel.

Hor's argument that, until the patent issued, he had no recourse to challenge inventorship, is wrong. As this Court knows, 35 U.S.C. § 135(a) applies to the determination of inventorship of a patent application in an interference proceeding, just as Wu challenged Chu's sole inventorship in the *Wu v. Chu* interference.

Based on the Cox Meeting, Hor and Meng knew or at least should have known that they were not considered inventors. At that moment, they possessed a claim for inventorship, unless Cox would change his opinion. And, if Hor and Meng had inquired to Chu, Cox, or UH about their status as listed inventors and learned they were not listed, they could have sought legal advice two decades ago. At that time, they would have been advised by their attorneys that they should obtain a copy of the Chu patent application (which UH would undoubtedly have provided just as it produced documents to Hor and Meng even before filing of the lawsuit), and file applications with the same claims so that an interference would have been declared to determine their rights, if any, as alleged co-inventors.

Hor and Meng offer many excuses, citing circumstantial evidence such as Chu's references to "our" patent and payments to them made by Chu out of his share of the Dupont royalties. A524-528. However, none of those excuses escape the undisputed Cox opinion. At that very time, they knew they were not inventors.

Hor and Meng argue that even though almost twenty years have passed, records have sufficiently refreshed memories that the presumption of evidentiary prejudice is rebutted. However, the record demonstrates important failure of memories after almost two decades. Moreover, for the last twenty years, UH has relied on Chu's status as sole inventor through expensive interferences and lengthy patent prosecution, and has been economically prejudiced in having to now defend against these eighteen-year old claims.

In its Memorandum and Order, the district court properly relied on *A.C. Aukerman Co. v. R.L. Chaides Construction Co.*, 960 F.2d 1020 (Fed. Cir. 1992) (*en banc*), *Advanced Cardiovascular Systems Inc. v. Scimed Life Systems Inc.*, 988 F.2d 1157 (Fed. Cir. 1993), *Frugoli v. Fougnes*, 74 U.S.P.Q. 2d 1716 (D. Ariz. Aug. 25, 2004), and *Moore v. Broadcom Corp.*, No. C06-05647 MJJ, 2008 WL 425932 (N.D. Cal. Feb. 14, 2002) to determine that a claim for inventorship under § 256 is subject to laches and estoppel. A10-42.

Misconstruing *Stark v. Advanced Magnetics, Inc.*, 29 F.3d 1570 (Fed. Cir. 1994), Hor argues that the district court presumed a *per se* requirement of diligence, arguing that some fact finding must be made before laches and estoppel can be even considered; however, *Aukerman* is the law of this Circuit.

VIII. ARGUMENT

A. Standard of Review for Summary Judgment

An appellate court reviews a grant of summary judgment *de novo* to determine whether it was correctly granted as a matter of law. *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998). Summary judgment should be granted if “the pleadings, the discovery and disclosure [of] materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law.” *Trinity Universal Ins. Co. v. Emp’rs Mut. Cas. Co.*, 592 F.3d 687, 690–91 (5th Cir. 2010); *see Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986),¹¹ “A genuine issue of material fact exists when the evidence is such that a reasonable jury could return a verdict for the non-moving party.” *Trinity Universal*, 592 F.3d at 691 (quoting *Gates v. Tex. Dep’t of Protective & Regulatory Servs.*, 537 F.3d 404, 417 (5th Cir. 2008)). “A material fact is one that could affect the outcome of the suit, and a genuine issue is one that could permit a reasonable jury to enter a verdict in the non-moving party’s favor.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). To defeat summary judgment, “the evidence as properly construed must be sufficient for a reasonable jury to find for the non-moving party;

¹¹ The rule has since been amended; however, “[t]he standard for granting summary judgment remains unchanged.” FED. R. CIV. P. 56, 2010 Notes of Advisory Committee, [¶1].

a mere scintilla of evidence will not suffice.” *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1323 (Fed. Cir. 2009).

The trial court must view all evidence in the light most favorable to the non-moving party and draw all **reasonable inferences** in that party’s favor. *Id* (emphasis added). “The evidence of the non-movant is to be believed, and all **justifiable** inferences are to be drawn in his favor.” *Anderson*, 477 U.S. at 255 (emphasis added). Hearsay, conclusory allegations, unsubstantiated assertions, and unsupported speculation are not competent summary judgment evidence. *See Little v. Liquid Air Corp.*, 37 F.3d 1069, 1075 (5th Cir. 1994) (noting that a non-movant’s burden is “not satisfied with ‘some metaphysical doubt as to the material facts’”) (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986)). The non-movants “are entitled to have reasonable inferences drawn in their favor, the inferences to be drawn must be rational and reasonable, not idle, speculative, or conjectural.” *Unida v. Levi Strauss & Co.*, 986 F.2d 970, 980 (5th Cir. 1993) (concluding that inferences were too speculative considering the evidence in the record) (quotations omitted).

Conclusory statements or allegations made by the non-movant that lack factual basis in the record need not be accepted as true. *See generally Cooper Tire & Rubber Co. v. Farese*, 423 F.3d 446, 456 (5th Cir. 2005) (determining that inferences unsupported by the record are improper); *see also Stachen v. Palmer*,

623 F.3d 15, 18 (1st Cir. 2010) (“On summary judgment, the non-moving party . . . is entitled to have the court credit his version of events, but with qualifications: incredible assertions by that party need not be accepted, nor must conclusory allegations.”). “Evidence from the moving party as to specific facts can be accepted by the court where no contrary evidence is tendered by the party opposing summary judgment.” *Id.* at 18 (emphasis omitted).

Conclusions of law are reviewed *de novo* at the appellate level. *See Univ. of Pittsburgh v. Hedrick*, 573 F.3d 1290, 1297 (Fed. Cir. 2009). A trial court’s findings of fact are reviewed for clear error. FED. R. CIV. P. 52(a)(6). This deference regarding facts is given to trial courts because of their expertise and experience with hearing the evidence and determining the facts proven. *Anderson v. City of Bessemer City*, 470 U.S. 564, 574–75 (1985).

B. Standard of Review for Laches

The Federal Circuit reviews a trial court’s decision of laches or equitable estoppel under the abuse of discretion standard. *Aukerman*, 960 F.2d at 1028; *see also Serdarevic v. Advanced Med. Optics, Inc.*, 532 F.3d 1352, 1358 (Fed. Cir. 2008). “An appellate court, however, may set aside a discretionary decision if the decision rests on an erroneous interpretation of the law or on clearly erroneous factual underpinnings. If such error is absent, the determination can be overturned only if the trial court’s decision represents an unreasonable judgment in weighing

relevant factors.” *Aukerman*, 960 F.2d at 1039; *see also Serdarevic*, 532 F.3d at 1358. A determination of laches on summary judgment is appropriate where the movant is entitled to judgment as a matter of law and there is no genuine issue of material fact. *See, e.g., Id.* at 1364 (affirming summary judgment of laches).

C. The Benchmark For Laches Is *Aukerman*

In *Aukerman*, this court, *en banc*, clarified the principles of laches and equitable estoppel as applied to statutory patent law—specifically, in the patent infringement setting. 960 F.2d at 1026. The court characterized laches and estoppel as “equitable defense[s] to a claim for patent infringement.” *Id.* at 1028. The court began with defining laches and its historical application:

Extended to suits at law as well, laches became **part of the general body of rules governing relief in the federal court system**. As a defense to a claim of patent infringement, laches was well established at the time of recodification of the patent laws in 1952.

Id. at 1029 (citations omitted). The court found that “[t]he right to interpose the equitable defense of laches in patent litigation, therefore, remains as viable today as it was when section 398 was first enacted in 1915.” *Id.* at 1031 (citations omitted).

The plaintiff in *Aukerman* argued that “the defense of laches [was] inapplicable, as a matter of law” to a patent infringement suit because § 282, the

infringement statute, contained no diligence requirement. *Id.* at 1029.¹² Plaintiff further argued that laches could not apply because 35 U.S.C § 286 set out a six-year limitation on damages for infringement. *Id.* at 1029. This Court held that § 282 did not “preclude the defense of laches” *Id.* at 1030 (“Without exception, all circuits recognized laches as a defense to a charge of patent infringement despite the reenactment of the damages limitation in the 1952 statute.”). It read § 286 “harmoniously” with the laches doctrine as it applied to § 282, finding that “[l]aches . . . invokes the *discretionary* power of the district court to limit the defendant’s liability for infringement by reason of the equities between the particular parties.” *Id.* (“Recognition of laches as a defense, thus, does not affect the general enforceability of the patent against others or the presumption of its validity under section 282. . . . An equitable defense under section 282 and the arbitrary limitation of section 286 do not conflict.”) (emphasis added).

D. The Elements of Laches

Laches “is committed to the sound discretion of the district court.” *Id.* *Aukerman*, 960 F.2d at 1032. “With its origins in equity, a determination of laches is not made upon the application of ‘mechanical rules.’” *Id.* “The defense, being personal to the particular party and equitable in nature, must have flexibility in its

¹² Hor and Meng similarly argue that laches is inapplicable here since § 256 contains no diligence requirement.

application.” *Id.* “A court must look at all of the particular facts and circumstances of each case and weigh the equities of the parties.” *Id.*

To dismiss a claim on the grounds of laches requires both an 1) “unreasonable and unexcused delay in bringing the claim, and 2) evidentiary or economic prejudice to the defendant as a result of the delay.” *Advanced Cardiovascular*, 988 F.2d at 1161. The party asserting laches must prove each element by a preponderance of the evidence. *Aukerman*, 960 F.2d at 1045.

1. The Period of Delay Begins When the Alleged Inventor Knew or Should Have Known of the Claim

While *Advanced Cardiovascular*, involved the question of laches based on events after a patent issued, “[w]hen applying the equitable doctrine of laches in order to bar a claim, the period of delay is measured from when the claimant had actual notice of the claim or would have reasonably been expected to inquire about the subject matter.” 988 F.2d at 1161. These principles were properly applied to this case by the district court. *Id.* at 1161. A25.

This court in *Advanced Cardiovascular* noted that “[c]onstructive notice is not an appropriate substitute for the determination of reasonableness or excuse for delay.” *Id.* at 1162. Absent actual knowledge, the facts must support a duty of inquiry:

[T]he law is well settled that, where the question of laches is an issue, the plaintiff is chargeable with such knowledge as he might have obtained upon inquiry,

provided the facts already known by him were such as to put upon a man of ordinary intelligence the duty of inquiry.

Id. (quoting *Johnston v. Standard Mining Co.*, 148 U.S. 360, 370 (1893)). “This knew-or-should-have-known criterion is appropriate to actions to correct inventorship. It is in harmony with the patent statute, for in accordance with 35 U.S.C. § 256 inventorship may be corrected at any time” *Id.* (footnote omitted).

2. The Presumptions of Laches and Prejudice

Additionally, *Aukerman* upheld the judicially-created presumption of laches when the claim extends six years or more back in time, even where there was no statutory basis for doing so:

“[P]resumptions, **whether created by statute or by judicial ruling**, arise out of considerations of fairness, public policy, and probability. . . . The presumption of laches arising from a more than six-year delay in filing suit is consonant with the mainstream of the law. . . . [T]he presumption provides a yardstick for reaching comparable results in comparable circumstances rather than leaving the matter without any guidelines to a district court’s exercise of discretion. In any event, **this court adopted a laches presumption** seven years ago agreeing with our sister circuits that the **presumption represents an equitable balancing of the interests of the parties.**” *Aukerman*, 960 F.2d at 1034–35 (quotations and citations omitted) (emphasis added).

The law is clear that equitable remedies such as laches are firmly in place.

Thus, for § 256 actions where the delay begins after the patent issues, the delay of more than six years after the alleged omitted inventor knew or should have known of the issuance of the patent mandates a rebuttable presumption of laches. *Serdarevic*, 532 F.3d at 1358. Once the presumption of laches has attached, a party can remain “utterly mute” on the issue of prejudice and nonetheless prevail. *Id.* at 1359. “Where the presumption applies, the two facts of unreasonable delay and material prejudice ‘*must* be inferred, absent rebuttal evidence.’” *Moore v. Broadcom Corp.*, No. C06-05647 MJJ, 2008 WL 425932, at 3 (N.D. Cal. Feb. 14, 2008) (quoting *Aukerman*, 960 F.2d at 1037) (emphasis in original).

A party can “rebut the presumption of laches by offering evidence to show an excuse for the delay or that the delay was reasonable, or by offering evidence sufficient to place the matters of evidentiary prejudice and economic prejudice genuinely in issue.” *Serdarevic*, 532 F.3d at 1359–60 (quoting *Aukerman*, 960 F.2d at 1038) (quotations omitted).

3. Unless Presumed, Laches Requires a Showing of Evidentiary or Economic Prejudice

“Evidentiary, or defense prejudice, may arise by reason of a defendant’s inability to present a full and fair defense on the merits due to loss of records, the death of a witness, or to the unreliability of memories of long past events, thereby undermining the court’s ability to judge the facts.” *Id.* at 1360 (quoting *Aukerman*, 960 F.2d at 1033). “Economic prejudice may arise where a defendant and possibly

others will suffer the loss of monetary investments or incur damages which likely would have been prevented by earlier suit.” *Id.* (quoting *Aukerman*, 960 F.2d at 1033).

“A delay of more than six years raises a presumption that it is unreasonable, inexcusable, and prejudicial.” *Wanlass v. Gen. Elec. Co.*, 148 F.3d 1334, 1337 (Fed. Cir. 1998); *see also Aukerman*, 960 F.2d at 1035–36. This six-year presumption has consistently been applied to claims of inventorship. *Advanced Cardiovascular*, 988 F.2d at 1163.

When the presumption applies, a prima facie case of laches is made out and the burden of producing evidence shifts to the plaintiff: “Whenever the presumption arises, including in the summary judgment context, the [plaintiffs’] evidence in rebuttal must be sufficient to raise a genuine issue of material fact about either the excuse for or reasonableness of the delay, or the existence of the prejudice.” *Wanlass*, 148 F.3d at 1337.

Issue No. 1

Whether the district correctly held that the period of delay for laches begins from a date when Hor and Meng knew or should have known of their claims for inventorship, even if prior to patent issuance.

IX. THE DISTRICT COURT PROPERLY RULED THAT LACHES BARS HOR AND MENG'S CLAIMS UNDER 35 U.S.C. § 256

Convinced that this Court has not ruled on the issue of whether the equitable doctrines of laches and estoppel apply to 35 U.S.C. § 256 actions in which evidence of the claims of inventorship extend prior to patent issuance, the district court followed *Aukerman*, 960 F.2d 1020 and *Advanced Cardiovascular*, 988 F.2d 1157. In reaching its decision here that laches in a § 256 action can be based on events prior to patent issuance, the district court also considered *Frugoli*, 74 U.S.P.Q. 2d 1716 and *Moore*, 2008 WL 425932 where, in § 256 actions, the start of the laches period was held to extend back to the date the claimant knew or should have known of the claim prior to issuance of the patent.

Thus, in a § 256 action, the district court held that laches may also be based upon events occurring before patent issuance. A30. The district court was correct for the following reasons: (1) if the doctrine of laches does not apply to pre-patent issuance claims, then, as in this case, the inventors can sit on their rights for decades; (2) *Stark*, 29 F.3d 1570 did not modify *Aukerman* by the addition of a precondition that an “affirmative obligation” must be found based upon the facts, before the elements of laches are factually assessed. *Id.* at 1574; (3) despite Hor and Meng’s excuses for not inquiring about inventorship, the undisputed facts show that they were told in 1986 or 1987 at the Cox Meeting that they were not inventors. Thus, there is no genuine issue of material fact as to when they knew or

should have known of their claims for inventorship; and, (4) the district court properly considered *Frugoli* and *Moore* even though *Moore's* reliance on a specific requirement of diligence in 37 C.F.R. § 1.48 was misplaced.

Additionally, this court in *MCV, Inc. v. King-Seeley Thermos Co.*, 870 F.2d 1568, 1573 (Fed. Cir. 1989) has applied the equitable doctrine of estoppel to events occurring prior to patent issuance. That holding should be extended to laches.

A. Laches Is Measured From the Date the Claim of Inventorship Was Known or Should Have Been Known—Regardless of the Date of Patent Issuance

Neither the district court nor Chu disagree with the proposition that a § 256 action for correction of inventorship of an issued patent must necessarily be brought after the patent issues, however, laches and estoppel are available defenses even though the period of delay began before patent issuance.

All the evidence to support Hor and Meng's inventorship claim dates from 1986 and 1987, while the patents-in-suit issued in 2006 and 2010, respectively. Equity requires that any § 256 claim must be made in a timely manner from the date the claim was known or should have been known, without causing prejudice to the patent owner. *Advanced Cardiovascular* focused on measuring laches from a date after patent issuance, but did not hold that laches cannot extend back to origin of the claim for inventorship. 988 F.2d 1157. In fact, the court noted that, apart from actual notice, the period of delay begins when one would have

reasonably been expected to inquire about the subject matter rather than the date of patent issuance. *Id.* at 1161. These principles apply to the facts of this case.

While the court in *Studio & Partners v. KI*, 2007 WL 3342597 at *6 (E.D.Wis.), recognized *Advanced Cardiovascular* for the proposition that correction of inventorship accrues only after the patent issues and concluded there was “little basis” to apply laches to S&P’s correction of inventorship claim, the court actually based summary judgment on the correction of inventorship claim because S&P did not have standing to sue. *Id.* at *5-*6.

Meng argues that the district court’s ruling denies her redress and that the district court left her with only a 35 U.S.C. § 116 remedy. Meng Br. at 13. In a similar vein, Hor argues that the district court “in effect held that Hor’s claim under § 256 was also a ‘claim’ under § 116. . . .” Hor Br. at 28. However, the district court recognized that prior to patent issuance, resolving inventorship disputes through an interference proceeding was normal (A30 citing *Fordham v. Onesoft Corp.*, No. CIV. A 00-10788-A, 2001 WL 641759, *3 (E.D.Va. Jan. 24, 2001)), and that filing an application to have the PTO declare an interference against another application is a means available before § 256 to allow omitted inventors to secure their rights. A29-30. See *Chou v. Univ. of Chi.*, 254 F.3d 1347, 1358 n.2 (Fed. Cir. 2001). In fact, two separate interferences were prosecuted between 1988 and 2000 against Chu’s patent applications. Hor and Meng participated in at least one of

these, the *Wu v. Chu* interference. A275-285, 368-369, 1439-1441. A cause of action brought before patent issuance under the interference statute § 135 is more analogous to a § 256 action because § 116 requires the consent of all parties and § 135 and § 256 are adversarial causes. The real issue is the inequity of allowing a claimant to wait for many years before making any claim of inventorship under § 256 to the prejudice of the named inventor and his assignee.

B. The District Court Properly Considered *Frugoli* and *Moore*

The district court acted correctly in relying first on Federal Circuit precedent and then consideration of other district court cases having similar facts because no Federal Circuit case has considered the specific issues in this case as to laches.

A26. *But see infra IX. D.*

In a § 256 action, the court in *Frugoli* held that the period of delay to determine laches began prior to the issuance of the relevant patents in 1998 and 2000. 74 U.S.P.Q. 2d at 1718. Suit was filed by Frugoli in 2002, but the district court found laches because Frugoli should have known of his rights as early as 1994-1995. *Id.* at 1722. Thus, the period of laches was measured from the date when the claim was known or should have been known, which occurred before the patents issued.

Hor and Meng's attempts to distinguish *Frugoli* are misplaced. The *Frugoli* court applied the equitable doctrine of laches to the claim which should have been

brought by Frugoli at a much earlier time. The court found that Frugoli was exposed to the patent issues numerous times in 1994-1995, just as Hor and Meng were from 1987-1993, but failed to inquire. The fact that payments from Verizon prompted Frugoli's claims was just additional evidence that Frugoli never had a personal interest in pursuing an inventorship claim. Hor and Meng have demonstrated that personal interest but only after years of waiting.

The *Moore* court also held that the period of delay can be measured from a time before the patent issued. 2008 WL 425932, at *5. The court in *Moore* did not misread *Advanced Cardiovascular*, as argued by Hor, and applied the knew or should have known test for laches under § 256 to a claim where Moore knew he was not considered an inventor four years before the patent issued and did not file suit until 2006, five years after the patent issued. *Id.* at *2-*4.

Hor criticizes the lower court's reliance on *Moore* because the diligence requirement had been removed from 37 C.F.R. § 1.48 when the *Moore* ruling was made. That is true. However, consideration of § 116 and the 37 C.F.R. § 1.48 requirement of diligence (which had been removed) were only a part of the *Moore* court's analysis. Rather, the *Moore* court extended the principles of *Aukerman* and *Advanced Cardiovascular* to long stale claims just as the *Frugoli* court did, based on the application of equity. A26-27. As in *Frugoli*, the court in *Moore* relied on

the fact that the alleged inventor knew or should have known of his claim prior to patent issuance:

[T]he rationale of *Advanced Cardiovascular Systems*, counsels in favor of this finding. In *Advanced Cardiovascular Systems*, the Circuit reasoned that laches apply [*sic*] at any time that inventorship may be remedied, but should not apply before the omitted inventor has learned of the claim.

Moore, 2008 WL 425932, at *4.

Thus, the equitable doctrine of laches exists in courts of law, whether or not there is a diligence requirement under 35 U.S.C. § 116 and 37 C.F.R. § 1.48 in an application before the USPTO. Just as laches and estoppel apply to § 282 even though there is no express requirement of diligence, laches should apply to § 256 as found in *Advanced Cardiovascular*, and extend to facts known prior to patent issuance. Here, the lower court correctly stated as a principle of equity: “The Court believes it would be inequitable to permit a plaintiff to sit on his rights to those remedies, **yet defeat a laches defense by waiting so long to pursue an inventorship claim that the only remaining remedy is one that does not mature until the patent issues.**” A30 (emphasis added).

C. **Hor and Meng Incorrectly Apply *Stark* as a Condition Precedent Before Proof of Laches Can Be Considered**

Misconstruing *Stark*, Hor and Meng attempt to add an additional requirement to *Aukerman* that confuses the elements of laches. *Stark* follows

Aukerman (en banc) by two years but never cites the case. Hor cites *Stark* for the proposition that there is no *per se* diligence requirement in § 256, and Hor had no factually based “affirmative obligation” to act prior to patent issuance as required in *Stark*. Hor Br. at 31–32.¹³ Hor’s interpretation of the “affirmative obligation” language is misplaced. The court in *Stark* stated, that “[w]hether Dr. Stark was deliberately misled by persons he had reasons to trust, and whether he behaved reasonably in failing to seek prompt verification and diligent correction, are questions of fact.” *Id.* This query is a restatement of the first element of laches set out in *Aukerman*, which the *Stark* court failed to address. *See Aukerman*, 960 F.2d at 1032. In 2000, the district court of New Jersey specifically dealt with an argument similar to Hor and Meng’s in interpreting *Stark*:

The Court does not read *Stark I* as broadly as Mars would suggest i.e., **that delay is irrelevant under Section 256** because neither Section 256 nor 37 C.F.R. Section 1.324 requires that an omitted inventor of an issued patent must diligently bring suit to correct inventorship or be forever barred from doing so (*Stark I* at 1575). While there is no statutory requirement of diligence, the *Stark* Court indicated that whether diligent action is required in a particular case must be determined on the facts of that case. **The Court interprets that as meaning that laches and its requirements of unreasonable delay and prejudice should be evaluated.**

¹³ Meng similarly states that “[i]n *Stark I*, this Court refused to read a diligence requirement into 37 C.F.R. § 1.324 that was not in the statutory language.” Meng Br. at 14.

Mars, Inc. v. Coin Acceptors, Inc., No. CIV A 90-49 JCL, 2000 WL 35459755, at *13 (D.N.J. Nov. 3, 2000) (emphasis added).

Finally, to any extent that it is necessary to find an affirmative obligation separate and apart from the elements of laches, it is noted that Hor and Meng were both employees of UH through 2006, yet failed to make any disclosure of their claim for eighteen or more years. A2454-2456.

D. The Federal Circuit Has Considered Pre-Patent Issuance Facts in Finding Equitable Estoppel

Although this Court has not decided the specific issue of whether the delay period (in the inventorship context) can begin prior to patent issuance for laches, in *MCV, Inc.*, 870 F.2d at 1573, this Court held that a § 256 claim for inventorship was barred by the equitable doctrine of estoppel based on events that began prior to patent issuance.

Here are the facts:

- 11-1982 Draft patent application was ready, and claimant Simon conferred on the drafts of the claims. *Id.* at 1569.
- 12-1982 Simon suggested that he be included as co-inventor. *Id.*
When told that Halsey Taylor company policy prohibited, Simon said that his company MCV's exclusive marketing rights were more valuable and he would cooperate. *Id.*

10-17-1983 Patent application filed by Halsey Taylor. *Id.*

07-15-1986 Patent application issued. *Id.*

08-11-1987 MCV's existing Complaint amended to add § 256 action. *Id.*

The court, recognizing that § 256 applied to “co-inventorship contests over issued patents,” looked back to December 1982, when Simon acquiesced to Halsey—about 3½ years prior to patent issuance and found estoppel:

MCV not only remained silent about co-inventorship after Simon's December 1982 discussion with Heyden, but affirmatively represented to Halsey Taylor that it would assist “in any way [it] could” to obtain the patent, and urged Halsey Taylor to “enforc[e] *your* patent rights” against asserted copiers of its product.

Id. at 1572 (emphasis added).

Thus, this Court has previously held that in determining equitable estoppel in a § 256 action, courts should rely on events prior to the patent issuing. *Id.* See also *Stewart & Stevenson Servs., Inc. v. Serv-Tech, Inc.*, 794 F. Supp. 202, 205-06 (citing to *Aukerman* to bar a co-inventorship claim based on laches and finding that a period of delay of five or six years beginning prior to patent issuance was unreasonable). The inclusion of delay as an element of estoppel in *MCV* has been

overruled,¹⁴ but the case holding that estoppel can be based on events before patent issuance has not even been criticized.

E. No Genuine Issues of Material Fact Exist as to Whether Hor and Meng Knew or Should Have Known of Their Claim

The district court properly relied upon the notice given to Hor and Meng at the Cox Meeting in 1987 or 1988 that Cox did not consider them to be inventors, but a pair of hands. The court further found that the scientific publications in 1987 that referred to Chu's patent application further corroborated Hor and Meng's knowledge. A31. There is no genuine issue of fact as to these findings. No reasonable or justifiable inference can negate the Cox Meeting and what Hor and Meng understood from that meeting. This was the correct ruling even under *Stark*. The district court made these findings applying the preponderance of the evidence standard of proof. A25.

While Hor attempts to draw inferences from all types of circumstantial evidence "in support of" his claimed belief that he was an inventor, the inferences are unjustifiable in view of his actual knowledge that he was not considered an

¹⁴ In *Aukerman*, 960 F.2d at 1042, the court overruled the listing of delay as an element of estoppel in *Jamesbury Corp. v. Litton Indus. Prods. Inc.*, 839 F.2d 1544, 1553 (Fed. Cir. 1988), which was relied on by *MCV* for its list of estoppel elements. 870 F.2d 1571. See *Rhone-Poulenc Agro, S.A. v. Monsanto Co.*, 445 F. Supp. 2d 531, 563, and *Ellison Educ. Equip., Inc. v. Chen*, No. SACV02-1184-JVS (ANX), 2004 WL 3154592 (C.D. Cal. Dec. 21, 2004).

inventor by Cox. Hor is left with the argument that Chu assured him and “misled him into believing he was to be named as an inventor.” Hor Br. at 34.

Hor never followed up with Chu, offering only the self-serving excuse, “I trust him.” A2228. Hor admitted that no one ever told him that he was an inventor. A2228. While Hor may have had all of the confidence in the world in Chu’s abilities, he knew Cox’s strong opinion, yet he never asked if Chu was able to change Cox’s mind. A2228. Hor’s “position is that if I am needed, they are going to ask me and I will just go in to do whatever is required.” *Id.* This “odd lack of curiosity” was unreasonable. *See Frugoli*, 74 U.S.P.Q. 2d at 1721.

Meng was never even told by Chu that he would talk to Cox.¹⁵ A243, 2171. Meng fully understood what Cox said, and consistently testified that Chu was the inventor. There is no factual dispute on these issues. There are no reasonable or justifiable inferences that can be drawn based upon feigned excuses. Simply put, Hor and Meng should have inquired as to whether or not they were named as inventors.

Issue No. 2

Whether the district court abused its discretion in holding that Hor and Meng’s unreasonable delay caused prejudice to Chu.

¹⁵ Meng makes no reference to Chu’s statement when describing the Cox Meeting. A243.

F. The Presumption of Evidentiary and Economic Prejudice Was Not Rebutted

Hor and Meng fail to rebut the presumption of evidentiary prejudice. Hor Br. at 41. The Federal Circuit has previously concluded that the death of three witnesses with knowledge of the alleged inventors' involvement with the conception of the invention and the dimming memories of all participants involved in the conception of the patented invention established evidentiary prejudice to the defendant. *Serdarevic*, 532 F.3d at 1360.

While there are publications of Chu and his lab team's results, there is little that has been written about the interaction between Chu, Hor, and Meng during the critical period of November 1986-March 1987. As recognized by the district court, the lab notebooks that Meng attempts to rely on give no indication as to who gave the instruction for the particular lab work to be done, which is "the ultimate inquiry in this case." A37.

Meng, who testified in the *Wu v. Chu* interference that Chu suggested the Yttrium (Y) substitution in mid-December, could not even recall whether or not Chu made that suggestion at the time of her deposition in this case. A727, 746. Meng also did not recall if Chu had suggested the substitution of Calcium (Ca). A726. She does not recall who suggested the combinations of Yttrium-Strontium (Y-Sr) and Lutetium-Strontium (Lu-Sr), either. A729. She has no recollection of Chu's design of the partial doping of rare earths into Yttrium-Barium (Y-Ba) and

Lanthanum-Barium-Copper-Oxide (La-Ba-Cu-O) compositions, but could only say that “maybe he [Chu] talked to me.” A730, 735. She admitted that her “memory may not be correct after so many years.” A730. Meng does not recall reviewing drafts of the papers before they were submitted. A731. She could only recall that Hor made one sample during this period. A734. Regarding the complete substitutions of rare earths, she only remembered that Hor suggested Gadolinium (Gd), beyond that, she does not know if Chu told her to do the rest and could not explain how Gd was used in mid-February, before Hor’s alleged conception of Gd. A736.

Regarding the much discussed meeting between Hor, Meng, and Wu, Meng does not recall if Hor actually referred to a Periodic Table as he stated. A738. She does not recall if student Li Gao was present at that meeting. A738–739. And, she does not even recall that Hor walked out of the Cox Meeting. And, she does not recall making any of the all-important Yttrium-Barium-Copper-Oxide (YBCO) compounds before January 29, 1987. A740.

None of the three parties recall exactly when the meeting with Cox took place; they can only estimate as 1987 or 1988.

As to Hor’s claim that he identified the black phase as superconducting, she has no recollection. A743. She does not recall actually having a meeting with Cox regarding her declaration of 1990. A749.

According to his 2010 deposition, Hor does not recall anyone suggesting Lu at the meeting with Wu (A719), though Meng now claims it was her suggestion. A2122. Hor did not know that the lab had already ordered the rare earth elements in January 1987. A721. Also, Hor does not even recall if he met with any attorneys regarding the declaration that he signed. A719.

Because of the lack of credible recollection refreshed by documentary evidence, Hor and Meng are free to provide self-serving testimony. Considering the passage of at least eighteen years, the failed memories as to significant events, from Chu's telephone call in mid-December to exactly who suggested Y and Lu as substitutions in the Wu meeting, to the important meeting with Cox, recollection of these events would have been so much more accurate had a timely inquiry been made by Hor and Meng so that the issue of inventorship was put on the table years ago.

As to economic prejudice, the investment by UH in these patents for over 20 years is undeniable. The Chu patents are valuable intellectual property rights of UH, and those rights have now been challenged in Federal Court. Earlier resolution through correction under § 135 may have avoided this controversy and perhaps a defense of deceptive intent under § 256. That is, Meng's recanting of her earlier testimony could have been avoided if these issues were raised and settled

years ago. In sum, Hor and Meng have failed to rebut the presumption of prejudice.

Issue No. 3

Whether the district court abused its discretion in holding that Hor and Meng's claims for inventorship were barred by equitable estoppel.

X. THE DISTRICT COURT WAS CORRECT IN FINDING EQUITABLE ESTOPPEL IN ADDITION TO LACHES

A. Equitable Estoppel and Standard of Review

Chu generally agrees with Hor and Meng's standard of review for equitable estoppel¹⁶ but adds the following. "Like laches, equitable estoppel is not limited to a particular factual situation nor subject to resolution by simple or hard and fast rules. At most, courts have provided general guidelines based on fact patterns which have been litigated, albeit attempting to provide a unifying set of principles." *Aukerman*, 960 F.2d at 1041. Unlike laches, the party accused of estoppel "cannot be unaware . . ." of the subject conduct. *Id.* at 1042. By establishing each element of the estoppel defense, all relief on a claim may be barred. *Id.* at 1041.

¹⁶ Hor incorrectly states that "*all inferences* must drawn [*sic*] in favor of the plaintiff." Hor Br. at 43 (emphasis added). The standard on summary judgment is "all *reasonable* inferences" not "all inferences." *Vita-Mix*, 581 F.3d at 1323.

B. As Previously Noted in MCV, the Evidence Fully Supports the Court's Finding of Equitable Estoppel Based on Events Prior to Patent Issuance

Although Chu did not plead equitable estoppel (A72-82) or assert it on summary judgment, the district court was persuaded to apply estoppel by Hor and Meng's failures to truthfully respond to inquiries at the Cox Meeting and in the case of Meng, her now recanted "lies" in two declarations and the deposition in the *Wu v. Chu* interference.

Hor argues that there is "nothing inherently misleading" in his statement that he did not remember the phone call "to which he was not a party." Hor Br. at 45. That is hardly the entire story. At the Cox Meeting, Hor heard Cox ask "who was the first person to propose a substitution of Yttrium?" *Id.* at 11. According to Hor, Chu then "immediately turned around and pointed to Meng and said, 'Ruling, do you remember that I called you and told you to do the Y-substitution?'" A221. Cox then commented, "it seems that from the discussions amongst you that no one seems to remember who the first to come up with this idea was." A221. Hor testified that "[a]lthough I was shocked (at Chu's statement), I did not want to embarrass Chu." A221. Had Hor spoken up instead of feigning a lack of memory, Cox would have known that further investigation was needed.

Even after the Cox Meeting, Hor, in his *Wu v. Chu* Declaration of December 4, 1990, stated that the discussion regarding the Y substitution was initiated, not by

himself, but by him and Meng, a position Hor now repudiates. A368-369, 2218–2219.

If Hor's failure to disclose his Y conception at the Cox Meeting and his *Wu v. Chu* declaration was not enough for a finding of estoppel, Hor now claims to be an inventor based on additional contributions: (1) on November 15, 1986, his alleged sintering of a particular sample of Ba-La-Cu-O (A217), (2) having a "wild idea" to replace Y with Gadolinium (Gd), which led him to realize that all of the rare earths could be substituted to produce high temperature superconductors (A219); (3) the addition of Scandium (Sc) (A64); and (4) reviewing all the data to pin down the material synthesis conditions to produce an optimal T_c . A217. Hor made all these claims in his 2006 Affidavit or his Complaint. In his Complaint, Hor also added inventorship claims based on (1) his work with Meng to successfully separate high purity YBCO samples which had the 1-2-3 formulation (A64), and (2) application of the "pair-breaking effect" in experiments beginning on March 12, 1987. A65. Hor never said a word about these alleged inventorship contributions until this controversy arose.

Hor also argues that he did not understand what it meant to be an inventor at that time. Yet, Hor must have understood that inventorship requires a contribution greater than acting as a "pair of hands" for Chu, as Cox labeled him and Meng; otherwise, he would not have been "insulted" and left the meeting. Hor's 2006

claims, on which he was silent 16-18 years ago, fully support a finding of equitable estoppel.

As for Meng, to make her inventorship claims, she must first disavow her 1990 (A1439–1441 ¶ 2) and 1993 (A275-285 ¶¶ 8-9) declarations as well as the statements made in her 1993 deposition (A1310-1311) supporting the telephone conversation with Chu. She also recanted all of her earlier testimony that she worked under Chu’s supervision and direction. Surely, the combination of her silence at the Cox Meeting coupled with her testimony in the interference, supporting Chu as the sole inventor create estoppel.

While Hor and Meng argue that neither Chu nor UH relied on Hor’s silence and Meng’s lies, UH went forward with the prosecution of its patents, defended these patent applications in multiple interferences, with Chu listed as the sole inventor, and then prosecuted the patents to completion and issuance over a period of almost 20 years—without hearing of any claim by Hor or Meng. Over this long period, Chu and UH had the firm understanding that the patent applications were filed with the correct inventorship. This evidence clearly and fully supports the reliance element of equitable estoppel.

Issue No. 4

Whether the district court abused its discretion in dismissing Meng’s “unclean hands” defense.

XI. THE DISTRICT COURT PROPERLY DISMISSED MENG'S UNCLEAN HANDS DEFENSE AS UNFOUNDED

A. Grounds for a Finding of Unclean Hands

Chu generally agrees with Meng's legal statements regarding unclean hands. *See* Meng Br. at 23-24. Meng claims that Cox, acting on behalf of Chu, failed to inform her that Wu had placed her inventorship at issue in the *Wu v. Chu* interference, which misled Meng into making statements that now threaten her inventorship claim, and delayed her in bringing her inventorship claims. Meng Br. at 23. That is, Meng says she would not have lied if she had known she might personally gain.

However, the timing of events relating to the unclean hands defense defeats Meng's entire claim.

B. Cox Did Not Even Know of Wu's Suggestion That Meng Was An Inventor Prior to Meng's Interference Declarations and Deposition

Meng argues that that Cox failed to give her notice of Wu's suggestion in the *Wu v. Chu* interference that she might be an inventor, which was concealment of a material fact. Meng Br. at 25. Meng's accusations go further, alleging that Chu and Cox set up Meng—particularly through her interference declarations—for the argument that she was acting as a “pair of hands,” and that benefited Chu and UH in the interference, at her expense. The events in chronological order belie these reckless accusations:

Reference	Date	Document
A2327-2330	08-14-1990	Interference Declared, <i>Wu v. Chu</i> Interference No. 102, 447
A1439-1455	12-04-1990	Meng Declaration, <i>Wu v. Chu</i> (See A1439)
A275-285	02-22-1993	Meng Declaration, <i>Wu v. Chu</i> (See A279)
A1282-1397	04-29-1993	Meng Deposition, <i>Wu v. Chu</i> (See A1310-1311)
A2331-2371	09-02-1993	Brief of Junior Party Wu, <i>Wu v. Chu</i>
A931-956	07-23-1998	Final Decision, <i>Wu v. Chu</i>

Meng's declarations were prepared and her deposition was taken prior to September 2, 1993, the date of Wu's brief, where, for the first time, Wu made any reference to Meng as a possible inventor. The Wu brief was filed four months after the Meng deposition. A2442-2445.¹⁷ In accordance with Federal Rule of Evidence § 901, Chu requests that judicial notice be taken of the Patent and Trademark

¹⁷ The docket of *Wu v. Chu* Interference No. 102,447 was obtained from the United States Patent and Trademark Office by Chu's law firm. A2442-2445. This docket is a Public Record of the U.S. Dept. of Commerce, Board of Patent Appeals and Interferences and is admissible under Federal Rule of Evidence 901(a) and 901(b)(7). *See United States v. Hernandez-Herrera*, 952 F.2d 342, 343 (10th Cir. 1991) (finding that Rule 901(b)(7), is an illustrative example—public records can be authenticated by any probative evidence that proves them to be what proponent claim them to be). Additionally, the docket is not hearsay under Federal Rule of Evidence 803(8).

Office docket of the *Wu v. Chu* interference and the Wu Brief, which came from the files of UH's attorneys.

Meng asserted her fatally defective claim of unclean hands, accusing Cox of allegedly misleading her into signing false declarations and giving false testimony, without even checking the interference docket and the timing of the Wu brief vis-a-vis Meng's declarations and deposition. If she had located the docket and reviewed the brief, she would have known how irresponsible her accusations are. These are serious charges against anyone, but especially an attorney.

While it is unnecessary to make any other points relating to Meng's defective unclean hands argument, Chu notes for the record that outside attorney Cox represented UH throughout this time, and never represented Meng, who was an employee of the university. A prosecuting attorney who "at all times was working on behalf of the [assignee] rather than the inventor" does not have an attorney-client relationship with an inventor (or here, purported inventor). *Sun Studs, Inc. v. Applied Theory Assocs., Inc.*, 772 F.2d 1557, 1568–69 (Fed. Cir. 1985) (determining that a co-inventor's assistance to Sun Studs' attorney in prosecuting the patent application did not give rise to an attorney-client relationship). An inventor, employed by a university, does not form an attorney-client relationship with the university's attorney by communicating with the attorney in the course of prosecuting the university's patent. *Univ. of W. Va., Bd. of*

Tr. v. VanVoorhies, 278 F.3d 1288, 1304 (Fed. Cir. 2002). Because an attorney-client relationship does not exist between the attorney and an alleged inventor, the attorney owes no fiduciary duties to the alleged inventor. *Avery Pharm., Inc. v. Haynes and Boone, L.L.P.*, No. 2-07-317-CV, 2009 WL 279334, at *7 (Tex. App.—Fort Worth Feb. 5, 2009) (mem. opinion). Only “when circumstances lead a reasonable person to believe they are represented by the attorney” may a fiduciary duty arise. *Bergthold v. Winstead Sechrest & Minick, P.C.*, No. 2-07-325-cv, 2009 WL 22026, *4-8 (Tex. App.—Fort Worth Jan. 29, 2009). When there is no evidence that the party assumed the attorney represented them, then there is no duty on the attorney to affirmatively deny representation. *See id.* As the district court recognized, Meng understood that Cox was UH’s attorney. A39. Cox’s actions, which include telling Meng that she was a “pair of hands” and obtaining declarations and deposition testimony from Meng consistent with Chu’s sole inventorship, did not create an attorney-client relationship between Cox and Meng. To the contrary, Meng understood that Cox was UH’s attorney and did not think she was an inventor. A2135. *See VanVoorhies*, 278 F.3d at 1304; *Bergthold*, 2009 WL 226026, at *4-*8.

Because Cox did not represent Meng, and because he had no knowledge of Wu’s suggestion that Meng was possibly an inventor prior to September 2, 1993,

there was no duty to Meng and no potential for conflict of interest.¹⁸ Cox could not have withheld information that he never had. Even if Cox had known that Wu made an allegation that Meng was an inventor, it was a mere allegation. In sum, the unclean hands defense was properly dismissed by the district court. Meng has painted a sordid picture in attempting to justify her lies. She has no excuse for her false accusation, and her attempt to malign Cox by these accusations is reprehensible.

CONCLUSION

For the foregoing reasons, Defendant/Appellee Chu respectfully requests the Court to affirm the judgment of the district court that Hor and Meng's claims of inventorship are barred by the doctrines of laches and estoppel and that Meng's defense of unclean hands is dismissed. A43-44.

Hor and Meng knew or should have known of Chu's patent applications as early as 1987. Importantly, the opinion of UH outside attorney Cox, which was expressed in their presence in 1987 or 1988 in the Cox Meeting that neither was an inventor because they were each a pair of hands for Chu, forms the principal basis for the defenses of laches and estoppel. In spite of being fully aware that Cox did not consider them inventors, Hor and Meng never took a minute to inquire if they

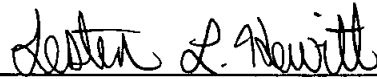
¹⁸ Ultimately, based upon Meng's own declarations and deposition testimony, the Patent Office Board of Appeals held that Wu failed to establish that Meng was a joint inventor. A948-949.

were listed as inventors. Instead, Hor and Meng offer excuses for not making a claim until 2006, about eighteen years after the Cox Meeting. These excuses include Chinese culture, lack of understanding of the law, listing as authors, and Chu's reference to "our patent," but overriding this circumstantial evidence is the undisputed evidence of the Cox Meeting. Further, any inference from this circumstantial evidence is unreasonable in view of the direct evidence of the Cox Meeting.

If Hor and Meng had inquired about inventorship, they would have promptly learned their status and could have taken action to obtain representation (just as they finally did in 2006). Thus, long prior to 2006 they could have asserted inventorship through an interference proceeding if UH did not agree with their claim.

The district court properly extended *Aukerman* and *Advanced Cardiovascular* to apply laches and estoppel to these events, which took place almost two decades before Hor and Meng asserted inventorship for the first time. While this Court has not applied laches based on events prior to patent issuance, in *MCV*, this Court based equitable estoppel on statements made years prior to patent issuance. Equity requires extending *MCV* to laches to this § 256 action.

December 21, 2011



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The necessary filing and service were performed in accordance with the instructions given me by counsel in this case.



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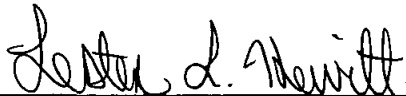
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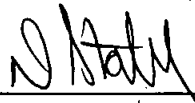


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DECLARATION OF AUTHORITY
PURSUANT TO FED. CIR. R. 47.3(d)

I, Danielle Staley, hereby declare under penalty of perjury that I am duly authorized to sign on behalf of Counsel for Appellee, Lester L. Hewitt, as he is unavailable to do so himself.

Executed: December 21, 2011



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