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APPLIED MATERIALS, INC.

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UNITED STATES DISTRICT COURT

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NORTHERN DISTRICT OF CALIFORNIA

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APPLIED MATERIALS, INC.,

CASE NO. 5:20-cv-9341

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Plaintiff,

**COMPLAINT FOR DECLARATORY
JUDGMENT**

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vs.

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DEMARAY LLC,

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Defendant.

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NATURE OF THE ACTION

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2 1. This is an action for declaratory relief arising under the patent laws of the United States.
3 Applied Materials, Inc. (“Applied”) brings the instant action because there is a substantial
4 controversy between Applied and Defendant Demaray LLC (“Demaray”), two parties having
5 adverse legal interests, of sufficient immediacy and reality to require a judicial declaration of the
6 parties’ legal rights. On July 14, 2020, Demaray filed lawsuits alleging that certain of Applied’s
7 customers, Intel and Samsung, infringe United States Patent Nos. 7,544,276 (the ’276 patent) and
8 7,381,657 (the ’657 patent) (collectively, the “Asserted Patents”) by using “semiconductor
9 manufacturing equipment including reactive magnetron sputtering reactors” manufactured by
10 Applied. (“Customer Suits”). True and correct copies of these complaints are attached as Exhibits
11 A and B (“Customer Complaints”).
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13 2. The Asserted Patents are both entitled “Biased Pulse DC Reactive Sputtering of Oxide
14 Films” and share a common specification. The ’276 patent discloses only apparatus claims directed
15 to a reactor having certain hardware components (herein also, “the ’276 reactor patent”), and Intel
16 and Samsung’s alleged infringement is based on their use of Applied’s reactors to produce
17 semiconductor products. On information and belief, neither Samsung nor Intel makes, sells or
18 offers to sell reactors; the alleged infringement of the ’276 reactor patent by Samsung or Intel is
19 based on their *use* of the accused reactor supplied by the manufacturer, Applied. The ’657 patent
20 (herein also, “the ’657 process patent”) discloses method claims for depositing films, where again,
21 Intel and Samsung’s alleged *use* of the reactors supplied by Applied, allegedly infringes the claimed
22 methods. The Applied reactors identified and accused in the Customer Complaints are used for the
23 same applications by Applied in its own laboratories in the Northern District of California for
24 research and development and customer demonstrations.
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1 3. Thus, contrary to the arguments Demaray has made to this Court, this is “a case where one
2 entity [Applied] makes an [allegedly] infringing product [Applied’s accused reactors], and its
3 customers [Intel and Samsung] are then sued for nothing more than purchasing and using it [as a
4 practical matter based on the commercial realities] in the only way possible.” *Applied Materials,*
5 *Inc. v. Demaray LLC*, Case No. 5:20-cv-5676-EJD (“DJ Action”), Dkt. No. 25, p. 6:5-9. As John
6 Forster, Applied’s Senior Director, Process Engineer for Metal Deposition Products, who has
7 worked at Applied since October 1993, explained in his declaration submitted to the Court in
8 opposing Demaray’s motion to dismiss for lack of subject matter jurisdiction in the DJ Action:
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10 Customers like Intel and Samsung typically provide Applied with a set of
11 specifications for a type of film they would like to deposit, and based on those
12 specifications, Applied manufactures and configures the RMS reactors to deposit
13 films according to the customers’ specifications. Post-installation modifications,
14 such as modifying the power supply or adding an additional component, such as a
15 filter, to the system as installed by Applied, could, for example, cause the RMS
16 reactor to no longer meet the customers’ required specifications or impact the
17 warranty of the reactor.

18 DJ Action, Dkt. No. 42-1, ¶ 6 (also attached hereto as Exhibit Q)

19 4. On information and belief, Demaray is well aware of these commercial realities and the
20 relationships between an equipment supplier like Applied and its customers, like Samsung and
21 Intel, who use Applied’s customized equipment for material deposition processes to manufacture
22 its products. Demaray’s principal, Dr. Ernest Demaray, is a former employee of Applied Komatsu,
23 a joint venture of Applied in the 1990s, and claims to have over fifty years of experience working
24 with or in the semiconductor industry. DJ Action, Dkt. No. 23-1, ¶¶ 2, 4. A true and correct copy
25 of Dr. Demaray’s declaration is also attached as Exhibit M. On information and belief, Demaray
26 also has extensive knowledge regarding the semiconductor industry through its purported
27 consultant attorney hired to manage the Customer Suits, Scot Griffin. On information and belief,
28 Mr. Griffin has extensive knowledge about the semiconductor industry, having worked for over a
decade in-house at Intel, Spansion, Inc. (another semiconductor manufacturer) and Tessera, Inc. (a

1 company that purported to be a global leader in the development of semiconductor packaging
2 technology). A true and correct copy of Mr. Griffin’s LinkedIn profile is attached as Exhibit R.

3 5. In considering the Customers Suits’ allegations with the commercial realities of Applied’s
4 relationships with its customers—including that Applied designs, manufactures and installs its
5 reactors at its customers’ fabrication facilities, and thereafter provides maintenance and support for
6 those reactors—Demaray’s affirmative act of filing the Customer Suits, which implicitly accused
7 Applied and Applied’s reactors of infringement, created a reasonable potential that infringement
8 claims could be brought against Applied based on the same allegations. As a result of Applied’s
9 reasonable apprehension of suit, on August 13, 2020, Applied filed a declaratory judgment action
10 of non-infringement of the Asserted Patents. *Applied Materials, Inc. v. Demaray LLC*, Case No.
11 5:20-cv-5676-EJD, Dkt. No. 1. On September 4, 2020, Applied moved for a preliminary injunction
12 to enjoin Demaray from proceeding with its Customer Suits during the pendency of the DJ Action.
13 *Id.*, Dkt. No. 13.

14 6. Demaray opposed by arguing that the Court did not have subject matter jurisdiction over
15 the DJ Action by representing that its allegations in the Customer Suits were directed at “particular
16 configurations” made by Intel and Samsung to Applied’s reactors such that “Demaray [did not]
17 accuse **Applied PVD reactors standing alone** of infringement in the Texas cases—Demaray
18 accused particular reactor configurations, and methods of depositing thin films using them, of
19 infringement in the Texas cases...”. DJ Action, Dkt. No. 23, p. 5:26-6:9 (emphasis added). But
20 nowhere in the Customer Complaints did Demaray allege that its accusations of infringement did
21 not accuse “Applied PVD reactors standing alone”. Nor did Demaray provide any evidence, let
22 alone allege in the Customer Complaints, that Intel and Samsung’s alleged infringement was based
23 on post-installation modifications to the hardware of the PVD reactors after the reactors were
24 manufactured, configured, and installed by Applied. On information and belief, Demaray’s subject
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1 matter jurisdiction challenge, including its arguments that the Customer Complaints were directed
2 to post-installation modifications by the customers, was simply a vehicle to slow down the DJ
3 Action while the Customer Suits proceeded. As explained below, Demaray’s representations that
4 it was not accusing “**Applied PVD reactors standing alone** of infringement” was not true, as
5 confirmed by Demaray’s recent statements that it may accuse Applied of infringement and
6 subsequently seeking discovery through subpoenas for documents and testimony directed to
7 *Applied’s configuration* of its reactors as supplied to the customers in order to determine “which
8 reactors are in dispute” (*i.e.*, which allegedly infringe).

10 7. On information and belief, although the Customer Complaints did not make an express
11 allegation of infringement against Applied, Demaray, in particular Dr. Demaray and Mr. Griffin,
12 understood and knew that their allegations against Intel and Samsung based on their use of
13 Applied’s reactors would be objectively and reasonably interpreted as an implied assertion against
14 Applied. While their knowledge is not required to establish a justiciable case or controversy, it
15 undermines Demaray’s characterization of the allegations in the Customer Suits in challenging this
16 Court’s subject matter jurisdiction and further evidences Demaray’s bad faith in bringing that
17 challenge. Setting aside Demaray’s after-the-fact representations to the Court and the veracity of
18 those statements when considering Dr. Demaray’s and Mr. Griffin’s intimate knowledge and
19 experience in this industry, Applied did in fact reasonably and objectively interpret the Customer
20 Complaints at the time the DJ Action was filed as affirmative acts by Demaray that created a
21 reasonable potential that infringement claims could be brought against Applied. DJ Action, Dkt.
22 No. 42-1, ¶¶ 5-9 (also at Ex. Q).

25 8. On information and belief, the implications of Demaray’s statements and arguments made
26 in challenging subject matter jurisdiction were that Intel and Samsung further “configured”
27 Applied’s reactors such that their use of the further configured reactors allegedly infringed the
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1 Asserted Patents, but the reactors as manufactured and sold by Applied, did not. The Court credited
2 Demaray's representations regarding its allegations in its Customer Complaints in finding that there
3 was not an actual controversy that Applied might be liable for direct infringement at the time
4 Applied filed its DJ Action. DJ Action, Dkt. No. 46, p. 7:12-19 ("In particular, Demaray alleges
5 Intel and Samsung configure the reactors such that they are comprised of a pulsed DC power supply
6 coupled to the target area, a RF bias power supply coupled to the substrate, and a narrow band
7 rejection filter placed between the DC power supply and the target area in order to deposit the thin
8 layer films in its semiconductor products."); p. 8:8-11 ("Although Applied is a supplier of the
9 reactors capable of this configuration and deposition method, ***Demaray does not allege in the***
10 ***WDTX Actions that Applied itself configures the reactors or promotes the patented configuration***
11 ***and method.*** See generally Intel Compl.; Samsung Compl (also at Exs. A–B). Without more,
12 Applied cannot be held liable for direct infringement.") (emphasis added).

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15 9. Since the filing of the DJ Action, Demaray's conduct in the Customer Suits and in the DJ
16 Action have (i) undermined the veracity of Demaray's representations to this Court regarding its
17 allegations in its Customer Complaints and (ii) demonstrated that even if an actual case or
18 controversy did not exist at the time the DJ Action was filed (Applied maintains that one did), an
19 actual case or controversy exists now and with respect to this new complaint. Based on the facts
20 that exist today, there can be no good faith dispute as to the Court's subject matter jurisdiction. The
21 totality of these affirmative acts in contrast to the inconsistent statements made to the Court, are
22 described in detail herein, are summarized in the tables below:
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<p>Demaray’s Representations (in red) / Affirmative Acts Supporting Subject Matter Jurisdiction (acts expressly directed at Applied in green) and/or Contradicting Representations</p>	<p>Reference Citation</p>
<p>July 14, 2020: Demaray files Customer Complaints against Applied’s customers accusing their use of Applied’s reactors of infringement and exclusively relying on Applied information</p>	<p><i>Infra</i>, ¶¶ 30-39; Exs. A, B.</p>
<p>September 25, 2020: Demaray represents to this Court that its allegations in the Customer Suits are not directed at Applied, but at post-installation configurations performed by Intel and Samsung relating to the power supply and narrow band-rejection filter limitations</p>	<p><i>Infra</i>, ¶ 42; DJ Action, Dkt. No. 23, p. 2:1-6, 2:21-23, 4:22-5:2, 5:26-6:1, 6:4-9.</p>
<p>October 9, 2020: Demaray serves infringement contentions in Customer Suits relying on the same Applied information as Customer Complaints, but no allegations or evidence of post-installation modifications or “configurations” to relevant hardware</p>	<p><i>Infra</i>, ¶¶ 43-44; Exs. C, D.</p>
<p>October 9, 2020: Demaray continues prosecution of Customer Suits, despite receiving confirmation in declarations in DJ Action rebutting Demaray’s theory of post-installation configurations by the customers</p>	<p><i>Infra</i>, ¶ 45; DJ Action, Dkt. No. 26-12 at ¶¶ 15–16; Dkt. No. 26-8 at ¶¶ 10–11; Dkt. No. 26-10 at ¶ 12.</p>
<p>October 22, 2020: Demaray refuses to provide its infringement contentions, which would inform how one would objectively and reasonably interpret the allegations in the Customer Complaints, to Applied or the Court</p>	<p><i>Infra</i>, ¶¶ 43, 48; Ex. S</p>

<p>1 Demaray’s Representations (in red) / Affirmative Acts</p> <p>2 Supporting Subject Matter Jurisdiction (acts expressly</p> <p>3 directed at Applied in green) and/or Contradicting</p> <p>4 Representations</p>	<p>Reference Citation</p>
<p>5 November 18-30, 2020: Demaray refuses to inform Applied</p> <p>6 whether Demaray intends to file compulsory counterclaims of</p> <p>7 infringement against Applied</p>	<p><i>Infra</i>, ¶ 46-47; Ex. E; DJ</p> <p>Action, Dkt. No. 40</p> <p>(JCMS) at 5:26-27, 6:7-11</p>
<p>8 November 23, 2020: Demaray moves to dismiss the DJ Action</p> <p>9 for lack of subject matter jurisdiction, continuing to allege that</p> <p>10 its Customer Complaints were directed to post-installation</p> <p>11 modifications or “configurations” by Samsung/Intel to relevant</p> <p>12 hardware</p>	<p>DJ Action, Dkt. No. 39</p>
<p>13 November 23, 2020: Based on Demaray’s representations that</p> <p>14 Applied’s reactors standing alone did not infringe the Asserted</p> <p>15 Patents in the Customer Suits, Applied requests a covenant not</p> <p>16 to sue; to-date, none has been granted</p>	<p><i>Infra</i>, ¶ 46, Ex. E</p>
<p>17 November 30, 2020: Demaray again represents that its</p> <p>18 allegations in the Customer Suits did not accuse “Applied’s</p> <p>19 reactors standing alone of infringement” despite declarations</p> <p>20 from Samsung and Intel in the DJ Action rebutting Demaray’s</p> <p>21 theory of post-installation configurations of Applied’s reactors</p> <p>22 by the customers</p>	<p>DJ Action, Dkt. No. 40</p> <p>(JCMS) at 5:19-22</p>
<p>23 November 30, 2020: Demaray claims that its infringement</p> <p>24 contentions are based on confidential reverse engineering reports</p> <p>25 “detailing Intel’s and Samsung’s infringing use of the claimed</p> <p>26 reactor configurations” but the contentions has no discussion or</p> <p>27 even reference to such reports</p> <p>28</p>	<p><i>Infra</i>, ¶ 47; DJ Action, Dkt.</p> <p>No. 40 (JCMS) at 5:15-22;</p> <p>11:8-11</p>

Demaray’s Representations (in red) / Affirmative Acts Supporting Subject Matter Jurisdiction (acts expressly directed at Applied in green) and/or Contradicting Representations	Reference Citation
<p>November 30, 2020: Demaray confirms in the Joint Case Management Statement it will seek discovery from Applied’s regarding Applied’s configurations to determine whether it will allege infringement against Applied and that it may accuse Applied of infringement</p>	<p>DJ Action, Dkt. No. 40 (JCMS) at 5:6-11; 11:11-14</p>
<p>December 12, 2020: Demaray serves Applied with subpoenas for documents and deposition testimony regarding Applied’s configuration of the reactors supplied to Intel and Samsung, including for the specific hardware components Demaray claimed were configured by Intel and Samsung</p>	<p><i>Infra</i>, ¶¶ 14, 49-50; Ex. F and G</p>
<p>December 20, 2020: Demaray confirms in correspondence to the Court in the Customer Suits that the discovery sought in its subpoenas to Applied was “necessary to determine which reactors are in dispute” (<i>i.e.</i>, which reactors allegedly infringe) “[g]iven Applied’s involvement in the development, manufacture, assembly and installation of reactors which are then used by Intel/Samsung in an infringing manner.”</p>	<p><i>Infra</i>, ¶¶ 15-16, 50; Ex. H</p>

10. On October 9, 2020, Demaray served its infringement contentions in the Customer Suits. The contentions failed to provide any allegations or evidence of Intel or Samsung “configuring” the reactors supplied by Applied in a manner that could be reasonably interpreted as alleging that Intel and Samsung (as the users of the reactors) infringe, but that Applied (as the supplier of the reactors) allegedly does not. For example, for claim 1 of the ’276 reactor patent, Demaray relied

1 exclusively on the same Applied documentation as referenced in the Customer Complaints, while
2 failing to cite to any evidence from Intel or Samsung. True and correct copies of public versions
3 of the infringement contentions against Intel and Samsung are attached as Exhibits C and D
4 respectively.

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6 11. On the same day, in support of Applied's motion for preliminary injunction, declarations
7 from Intel, Samsung and Applied were submitted in the DJ Action rebutting Demaray's allegations
8 that Intel and Samsung "configure the reactors" in an allegedly infringing manner. DJ Action, Dkt.
9 No. 26-12 at ¶¶ 15–16; Dkt. No. 26-8 at ¶¶ 10–11; Dkt. No. 26-10 at ¶ 12. Accordingly, on
10 information and belief, at least as of October 9, 2020, Demaray was on notice that Intel and
11 Samsung did not perform the post-modification configurations Demaray purported to allege in
12 seeking to distinguish Intel and Samsung's alleged infringement from any allegations that would
13 be directed at Applied. Demaray never challenged the veracity of those declarations, but only
14 argued that the Court should not consider them because they were created after the filing of the DJ
15 Action.
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17 12. Demaray's affirmative acts supporting subject matter jurisdiction continued. Between
18 November 18, 2020 and November 30, 2020, Applied and Demaray held multiple conferences and
19 exchanged multiple correspondence where Applied repeatedly asked Demaray whether it intended
20 to file compulsory counterclaims of infringement of the Asserted Patents against Applied in the DJ
21 Action. Demaray refused to confirm that it would *not* file infringement claims against Applied,
22 claiming it needed discovery from Applied. On information and belief, if Demaray's infringement
23 allegations were truly directed at post-installation modifications of Applied's reactors by Samsung
24 and Intel, as opposed to directed at the reactors manufactured, sold and installed by Applied,
25 Demaray could have confirmed that position and ended the inquiry. Demaray, of course, did not.
26 Applied also asked Demaray whether it would provide Applied with a covenant not to sue;
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1 Demaray did not agree to provide one. A true and correct copy of the correspondence between
2 counsel is attached as Exhibit E.

3 13. Based on these exchanges and the developments since Demaray filed its Customer Suits, in
4 discussing a proposed schedule in the DJ Action, Applied reasoned in the Parties' November 30,
5 2020 Joint Case Management Statement that "to the extent there was not a case or controversy at
6 the time Applied filed its declaratory judgment action (Applied contends there was), there certainly
7 is now in the absence of a covenant not to sue that Demaray has yet to provide." DJ Action, Dkt.
8 No. 40 at 13:9-12. In response, Demaray did not disagree, only stating that "the Court and the
9 parties can address such a future case, and the jurisdictional merits associated therewith, if it is ever
10 brought." *Id.* at 13:22-24.

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12 14. Less than two weeks later, on December 12, 2020, Demaray took further affirmative acts
13 directed at Applied by serving Applied with subpoenas for the production of documents and
14 deposition testimony in the Customer Suits to determine whether Applied and its reactors supplied
15 to Intel and Samsung allegedly infringe. A true and correct copy of the subpoenas are attached as
16 Exhibit F and G. The subpoenas were directed at "each Applied reactor supplied to Intel or
17 Samsung with a RMS PVD chamber" and specifically requested documents regarding, for example,
18 "the configuration of the reactor" (Request No. 6); "any filters configured to be used with the power
19 sources" (Request No. 6); "the power sources to the target and the power sources to the substrate"
20 (Request No. 9); "the use of pulsed DC power to the target in RMS PVD chambers in Applied
21 reactors" (Request No. 10); "the use of an RF bias on the substrate and pulsed DC power to the
22 target in RMS PVD chamber in Applied reactors" (Request No. 11); and "the use of a filter with a
23 RMS PVD chamber in Applied reactors with an RF bias on the substrate and pulsed DC power to
24 the target" (Request No. 12), as well as deposition testimony regarding the same. Notably, these
25 hardware components and their "configuration" in the reactors are what Demaray repeatedly argued
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1 in multiple pleadings before this Court were “configurations” made by Applied’s customers, and
2 not Applied, to argue that this Court did not have subject matter jurisdiction over the DJ Action.

3 15. For avoidance of any ambiguity as to the purpose of the subpoenas and whether Demaray’s
4 allegations in the Customer Suits could be reasonably and objectively interpreted as being directed
5 at Applied and Applied’s reactors as manufactured and sold to its customers, on December 20,
6 2020, Demaray explained in correspondence to the Court in the Customer Suits that the discovery
7 sought was “necessary to determine which reactors are in dispute” (*i.e.*, which reactors allegedly
8 infringe) and that it sought discovery from Applied “[g]iven Applied’s involvement in the
9 development, manufacture, assembly and installation of reactors which are then used by
10 Intel/Samsung in an infringing manner.” A true and correct copy of Demaray’s correspondence is
11 attached as Exhibit H. Nowhere in the subpoenas or correspondence to the Court in the Western
12 District of Texas did Demaray explain, as it did to this Court in the DJ Action, that its allegations
13 were directed at the use of reactors that allegedly infringed only after post-installation modifications
14 by Applied’s customers.
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16 16. The subpoenas to Applied seeking discovery regarding Applied’s configurations of its
17 reactors supplied to Intel and Samsung, and not Intel/Samsung’s alleged post-installation
18 modifications or configurations of the reactors, “to determine which reactors are in dispute” are
19 additional affirmative acts directed at Applied giving rise to an actual case or controversy between
20 Demaray and Applied. The subpoenas further directly contradict Demaray’s prior representations
21 to this Court that the allegations in the Customer Complaints were directed to Samsung and Intel’s
22 alleged post-installation configurations of Applied’s reactors and confirm that the Customer
23 Complaints, objectively interpreted, made an implied assertion of infringement against Applied.
24 On information and belief, Demaray knows, and always has known including at the time it filed
25 the Customer Suits, that Intel and Samsung used the accused reactors as manufactured, sold and
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1 installed by Applied, such that any allegations against Intel and Samsung based on their use of the
2 reactors are implicit allegations against Applied for its manufacture and sale of the same reactors
3 for the same alleged reasons.

4 17. Under the totality of the evidence and the facts that exist today, which include: (i) the
5 commercial realities of the relationship between Applied and its customers using Applied's
6 products; (ii) Demaray's exclusive reliance on Applied's products in the Customer Complaints;
7 (iii) Demaray's infringement contentions in the Customer Suits; (iv) Applied's customers'
8 confirmation that they do not perform the post-installation modifications to Applied's reactors that
9 Demaray contended took place; (v) Demaray's refusal to grant Applied a covenant not to sue; (vi)
10 Demaray's refusal to inform Applied or the Court in the DJ Action whether it will assert
11 compulsory counterclaims; (vii) Demaray's requests to obtain discovery from Applied to determine
12 if Applied allegedly infringes; (viii) Demaray's serving of subpoenas to Applied for discovery
13 regarding the reactors it supplies to Intel and Samsung, including Applied's configurations of the
14 hardware components Demaray previously alleged that Intel and Samsung configures on their own;
15 and (ix) Demaray's representations in the Customer Suits that the discovery from Applied is
16 necessary to determine which reactors allegedly infringe—there is a substantial controversy
17 between the parties having adverse legal interests, of sufficient immediacy and reality regarding
18 the Asserted Patents.
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21 18. Demaray's filing and continued prosecution of the Customer Suits based on Samsung and
22 Intel's use of equipment supplied by Applied give rise to a substantial controversy between Applied
23 and Demaray of sufficient immediacy and reality for another, independent reason—Applied's
24 reactors (including their use by Applied's customers) are already covered by a license to the
25 Asserted Patents. In December of 1998, Demaray's founder, Dr. Ernest Demaray, along with
26 several colleagues from Applied or Applied Komatsu, left to form a new company: Symmorphix,
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1 Inc. (“Symmorphix”). Symmorphix and Applied Komatsu negotiated a Sales and Relationship
2 Agreement (“SRA”) which facilitated the former employees’ continued work on technology they
3 had been developing at Applied Komatsu, including sputtered silicon deposition technology. A
4 true and correct copy of the December 11, 1998 SRA is attached as Exhibit I.

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6 19. Symmorphix and Applied Komatsu were two sophisticated commercial entities that
7 negotiated an arms’ length commercial contract permitting Symmorphix to continue using Applied
8 Komatsu’s equipment and intellectual property to develop its own, granting Applied Komatsu a
9 license to certain Symmorphix patents (which include the Asserted Patents), and preventing
10 Applied Komatsu from competing with Symmorphix. The license and release provisions were set
11 forth in Exhibit C to the SRA, entitled “Future Dealings, Intellectual Property, Confidential
12 Information and Licenses.” A true and correct copy of Exhibit C to the December 11, 1998 SRA
13 is attached as Exhibit J.

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15 20. On information and belief, after the SRA was executed, Symmorphix sought to amend
16 certain provisions of Exhibit C of the SRA, including by adding the clause “[t]o the extent required
17 by existing AKTA Employee Agreements with any Symmorphix personnel” to further limit the
18 scope of the license granted by Symmorphix to Applied to only the inventions of the former Applied
19 Komatsu employees with assignment provisions for which Applied Komatsu agreed to release. A
20 true and correct copy of the January 29, 1999 Modified Exhibit C is attached as Exhibit K.

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22 21. The license grant expressly permitted Applied Komatsu to transfer or assign such license
23 grant to Applied, and expressly allowed its customers to use such inventions as well. Accordingly,
24 Demaray’s Customer Suits, based on Intel and Samsung’s use of equipment supplied by Applied,
25 violates the license grant in the SRA. Therefore, Applied’s reactors, including their use by Intel,
26 Samsung or any other customer of Applied that Demaray may sue in the future, cannot infringe.
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1 22. On information and belief, the former Applied and Applied Komatsu employees continued
2 to use Applied’s confidential information, intellectual property and equipment to develop
3 technology at Symmorphix. On information and belief, Symmorphix also continued to hire
4 personnel from Applied and Applied Komatsu, including Mukundan Narasimhan, one of the four
5 named inventors on the Asserted Patents, who left Applied to join Symmorphix on April 16, 2001.
6 On information and belief, using confidential information produced, conceived, made or first
7 actually reduced to practice during either Mr. Narasimhan’s employment at Applied or within a
8 year of his termination, Mr. Narasimhan filed a patent application relating to his work at Applied
9 and that led to the Asserted Patents. Pursuant to Mr. Narasimhan’s employment agreement, his
10 ownership rights in the application automatically assigned to Applied, such that Demaray does not
11 have complete ownership over the Asserted Patents. That defect in the chain of title precludes
12 Demaray from asserting infringement of the Asserted Patents.
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15 23. Therefore, Applied requests declaratory relief as follows: (1) a declaratory judgment that
16 Applied’s products do not infringe the Asserted Patents because they do not meet each and every
17 limitation of any asserted claim; (2) a declaratory judgment that Applied’s products cannot infringe
18 because Applied and its customers using Applied’s equipment have a license to use the Asserted
19 Patents by reason of a license granted in the SRA; and (3) a declaratory judgment that Applied’s
20 products cannot infringe the Asserted Patents because Demaray does not have full ownership rights
21 in the Asserted Patents.
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23 **THE PARTIES**

24 24. Plaintiff Applied Materials, Inc. (“Applied”) is a corporation organized and existing under
25 the laws of the state of Delaware, with its principal place of business at 3050 Bowers Avenue, Santa
26 Clara, CA 95054-3299. Applied is a leader in materials engineering solutions that creates
27 technology and products used for semiconductor fabrication, including but not limited to reactors
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1 in the Endura product line identified by Demaray in the Customer Complaints and accused in
2 Demaray's infringement contentions in the Customer Suits.

3 25. Defendant Demaray LLC ("Demaray") is a limited liability company organized and existing
4 under the laws of the state of Delaware. Dr. Richard Ernest Demaray is the founder of Demaray
5 LLC. Dr. Demaray is also one of the named inventors on the Asserted Patents. Dr. Demaray
6 describes Demaray LLC as a "Silicon Valley, CA" company which "[is] about the portfolio of my
7 patents."¹ Dr. Demaray claims to have "been working in and with the semiconductor industry for
8 more than fifty years." DJ Action, Dkt. No. 25-3, ¶ 2.

9 SUBJECT MATTER JURISDICTION

10 26. This action arises under the Declaratory Judgment Act, 28 U.S.C. § 2201, and under the
11 patent laws of the United States, 35 U.S.C. §§ 1–390. This Court has subject matter jurisdiction
12 over this action under 28 U.S.C. §§ 1331, 1338(a), and 2201(a).

13 27. On July 14, 2020, Demaray undertook the affirmative acts of filing two actions in the
14 Western District of Texas against Intel and Samsung, accusing them of infringing the Asserted
15 Patents by using Applied's reactors. *Demaray LLC v. Intel Corporation*, No. 6:20-cv-634 (W.D.
16 Tex. July 14, 2020); *Demaray LLC v. Samsung Electronics Co., Ltd, et al.*, No. 6:20-cv-636 (W.D.
17 Tex. July 14, 2020). *See* Exs. A, B. While the Customer Complaints did not name Applied as a
18 Defendant or expressly accuse Applied of infringement, based on the commercial realities of
19 Applied's relationship with its customers, including the manner in which it designs, manufactures,
20 configures and installs its reactors to meet its customers' required specifications, the allegations
21 made an implied assertion of infringement against Applied. Applied also objectively and
22 reasonably believed the allegations were directed at Applied.

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28 ¹ <https://www.edemaray.com/bios.html>

1 28. The Customer Complaints allege infringement of claim 1 of U.S. Patent No. 7,544,276,
2 entitled “Biased Pulse DC Reactive Sputtering of Oxide Films”, reproduced below with the
3 limitations annotated [1a] – 1[e]:

4 1. A reactor according to the present invention, comprising:

5 [1a] a target area for receiving a target;

6 [1b] a substrate area opposite the target area for receiving a substrate;

7 [1c] a pulsed DC power supply coupled to the target area, the pulsed DC power supply
8 providing alternating negative and positive voltages to the target;

9 [1d] an RF bias power supply coupled to the substrate; and

10 [1e] a narrow band-rejection filter that rejects at a frequency of the RF bias power supply
11 coupled between the pulsed DC power supply and the target area.
12

13
14 29. The Customer Complaints allege infringement of claim 1 of U.S. Patent No. 7,544,657,
15 also entitled “Biased Pulse DC Reactive Sputtering of Oxide Films”, reproduced below with the
16 limitations annotated [1a] – 1[e]:

17 1. A method of depositing a film on an insulating substrate, comprising:

18 [1a] providing a process gas between a conductive target and the substrate;

19 [1b] providing pulsed DC power to the target through a narrow band rejection filter such
20 that the target alternates between positive and negative voltages;

21 [1c] providing an RF bias at a frequency that corresponds to the narrow band rejection filter
22 to the substrate;

23 [1d] providing a magnetic field to the target; and

24 [1e] reconditioning the target; wherein reconditioning the target includes reactive sputtering
25 in the metallic mode and then reactive sputtering in the poison mode.
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1 30. Demaray accused Applied's customers of infringing the Asserted Patents by using "RMS
2 reactors" in the "Endura product line from Applied Materials, Inc." to deposit layers into certain
3 semiconductor products. Ex. A at ¶ 25; Ex. B at ¶ 28. Specifically, Demaray identified "reactors
4 that can be configured for deposition of TaN layers (*e.g.*, CuBS RFX PVD [*sic*] with the Encore II
5 Ta(N) barrier chamber) and TiN (*e.g.*, Cirrus ionized PVD chamber)". *Id.* To support its claims
6 for infringement, Demaray relied exclusively on Applied's products, materials, literature, and
7 website. *See generally* Exs. A–B. Every image in the Customer Complaints are of Applied's
8 reactors or components thereof, or are images of diagrams and schematics of Applied's reactors
9 and/or are from Applied's website or product materials.

11 31. Applied designs, tests, develops, manufactures, and supplies its reactors to semiconductor
12 product manufacturers, such as Intel and Samsung, including reactors in the Endura product line.
13 These reactors are used by Applied's customers to deposit film layers in semiconductor products.
14 Applied has designed, tested, developed, manufactured, and supplied RMS reactors for many years,
15 and intends to continue to do so. Applied's customers, such as Intel and Samsung, do not simply
16 purchase Applied's RMS reactors "off the shelf" to be used in the process of making semiconductor
17 products. Rather, Applied's customers typically provide Applied with a set of specifications for a
18 type of film they would like to deposit, and based on those specifications, Applied manufactures
19 and configures the RMS reactors to deposit films according to the customers' specifications.
20 Applied then assembles and installs the reactor at the customers' fabrication facilities through a
21 complex process requiring precision and planning between Applied and Applied's customer.

24 32. Thus, on information and belief, Intel and Samsung use the Applied reactors identified in
25 the Customer Complaints as manufactured and installed by Applied at their respective fabrication
26 facilities, without modifying the relevant hardware components (*e.g.*, the power supplies coupled
27 to the target and the substrate or any filter between the power supply and the target).

1 33. While Demaray’s Customer Complaints made vague allegations to “configurations” of
2 Applied’s reactors, those allegations either relied exclusively on evidence from Applied (as
3 opposed to Samsung or Intel) or on no evidence whatsoever. *See, e.g.*, Ex. A at ¶¶ 33, 36, 39; Ex.
4 B at ¶¶ 36, 39, 42 (“On information and belief, [Intel/Samsung] configures, or causes to be
5 configured ...”). Demaray made these “configuration” allegations for claim 1 of the ’276 patent as
6 to three power supply-related limitations contained in [1c]-1[e]: (1) the “pulsed DC power supply
7 coupled to the target,” (2) “an RF bias power supply coupled to the substrate,” and (3) “a narrow
8 band-rejection filter that rejects at a frequency of the RF bias power supply coupled between the
9 pulsed DC power supply and the target area.” *Id.* Based on the commercial realities of Applied’s
10 relationship with its customers, including Applied’s understanding that its customers generally use
11 the reactors as manufactured, configured and installed by Applied without post-installation
12 hardware modifications, Applied reasonably and objectively interpreted these allegations as
13 directed at Applied and Applied reactors.

14 34. Regarding the first limitation—“pulsed DC power supply coupled to the target”—Demaray
15 relied exclusively on (1) schematics from Applied’s product literature, Ex. A at ¶¶ 34, 35 (first
16 image); Ex. B at ¶¶ 37, 38 (first image), and (2) an image of an Applied Endura reactor, Ex. A at ¶
17 35 (second image); Ex. B at ¶ 38 (second image). Demaray did not allege that Samsung or Intel
18 “configured” the accused reactors with respect to this hardware component by, for example,
19 coupling its own power supply to the target or replacing the power supply provided by Applied.
20

21 35. Regarding the second limitation—“an RF bias power supply coupled to the substrate”—
22 Demaray relied exclusively on (1) a schematic from Applied’s product literature, Ex. A at ¶ 37; Ex.
23 B at ¶ 40, and (2) two images of Applied’s reactors. Demaray did not allege that Samsung or Intel
24 “configured” the accused reactors with respect to this hardware component by, for example,
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1 coupling its own RF bias power supply to the substrate or replacing the power supply provided by
2 Applied.

3 36. Regarding the third limitation—the “narrow band-rejection filter”—Demaray provided no
4 citation to any evidence whatsoever, whether from Applied, Samsung or Intel. Ex. A at ¶¶ 39-40;
5 Ex. B at ¶¶ 42-43. Rather, Demaray alleged that Intel and Samsung each “configures, or causes to
6 be configured the [Intel/Samsung] RMS reactors such that they compromise a narrow band-
7 rejection filter that rejects at a frequency of the RF bias power supply coupled between the pulsed
8 DC power supply and the target area” and that this filter is used to “protect the pulsed DC power
9 supply from feedback from the RF bias power supply.” *Id.* Based on the commercial realities of
10 Applied’s relationship with its customers, including Applied’s understanding that its customers
11 generally use the reactors as manufactured and installed by Applied without post-installation
12 hardware modifications, Applied reasonably and objectively interpreted this allegation to be
13 directed at Applied. Nor did Demaray provide any basis or explanation as to how Intel and
14 Samsung, through any purported post-installation modifications, met this limitation.
15

16 37. In the Customer Complaints, each claim limitation [1a] – [1e] of the ’276 reactor patent,
17 except for the “narrow band-rejection filter” limitation [1e] for which no evidence was presented,
18 relied on Applied’s products, materials, literature, and website. Although Demaray did not
19 explicitly identify any Applied product information in support of its allegations regarding the
20 “narrow band-rejection filter” claim limitation [1e] of the ’276 patent, *see* Ex. A at ¶¶ 39-40 and
21 Ex. B at ¶¶ 42-43, Applied’s Senior Director, Process Engineer for Metal Deposition Products,
22 John Forster, who has worked at Applied since October 1993, explained that “adding an additional
23 component, such as a filter, to the system as installed by Applied, could, for example, cause the
24 RMS reactor to no longer meet the customers’ required specifications or impact the warranty of the
25 reactor.” Ex. Q at ¶ 6. Mr. Forster provided additional explanation for why after Applied reviewed
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1 the Customer Complaints against Intel and Samsung, Applied interpreted those allegations as direct
2 at Samsung and Intel's use of the reactors as manufactured, configured and installed by Applied.
3 *Id.* at ¶¶ 4-9. Accordingly, Applied reasonably and objectively interpreted Demaray's affirmative
4 act of asserting that Intel and Samsung infringed the '276 reactor patent, as creating a reasonable
5 potential that infringement claims, *e.g.*, for the manufacture or sale of the same reactors, could be
6 brought against Applied based on the same allegations.
7

8 38. In the Customer Complaints, each claim limitation [1a] – [1e] of the '657 patent, including
9 limitations [1b] and [1c] that include the “narrow band-rejection filter”, relied on Applied's
10 products, materials, literature, and website. Accordingly, Applied reasonably and objectively
11 interpreted Demaray's affirmative act of asserting that Intel and Samsung infringed the '657 patent,
12 as creating a reasonable potential that infringement claims, *e.g.*, for the same use of the same
13 reactors in Applied's laboratory for research and development or customer demonstrations or for
14 inducing the alleged direct infringement of Applied's customers, could be brought against Applied
15 based on the same allegations.
16

17 39. Based on the commercial realities of Applied's relationship with its customers, including
18 Applied's own knowledge as to the processes for which Applied designs, manufactures, sells and
19 installs its reactors at its customers' fabrication facilities, and thereafter provides on-site
20 maintenance and support of its reactors, when considering the totality of the allegations made in
21 the Customer Complaints, Applied objectively and reasonably interpreted the affirmative acts of
22 Demaray filing the Customer Complaints and the allegations therein as making an implied assertion
23 of infringement of the Asserted Patents against Applied.
24

25 40. Having a reasonable apprehension that it would face an infringement suit, on August 13,
26 2020, Applied filed a complaint for a declaratory judgment that Applied and its reactors do not
27 infringe the Asserted Patents. DJ Action, Dkt. No. 1. Applied subsequently amended its complaint
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1 on September 1, 2020, to add non-infringement claims based on certain license and assignment
2 agreements. DJ Action, Dkt. No. 13.

3 41. On September 4, 2020, Applied filed a motion for preliminary injunction to enjoin Demaray
4 from proceeding in its Customer Suits against Intel and Samsung during the pendency of this action.
5 Dkt. No. 14.

6 42. On September 25, 2020, Demaray responded by asserting that the Court lacked jurisdiction
7 over Applied's non-infringement claims because there was no case or controversy. DJ Action, Dkt.
8 No. 23. In support, Demaray made the following representations to this Court to argue that
9 Applied's reactors as manufactured, configured and installed by Applied, were not accused of
10 infringement, but rather that Intel and Samsung "configured" the reactors on their own, after
11 Applied's installation of the reactors at the customers' fabrication facilities, in a manner that
12 allegedly infringes the Asserted Patents:
13

- 14 • "In this instance, *Applied's reactors standing alone are not accused of infringement*
15 *in Texas.*" *Id.* at 2:1-2 (emphasis added).
- 16 • "Instead, methods of thin film deposition in a reactor with a *specific configuration used*
17 *by Intel and Samsung*, and that specific reactor configuration, are accused. *There is no*
18 *allegation in Texas (or in this case) that Applied provides the special reactor*
19 *configuration to Intel or Samsung or encourages its use*, or that Applied's reactors
20 standing alone have no substantial non-infringing uses." *Id.* at 2:2-6 (emphasis added).
- 21 • "The Texas cases concern *particular uses by the Texas defendants of manufacturing*
22 *equipment those defendants have configured in a specific manner* to make their own
23 semiconductor products." *Id.* at 2:21-23 (emphasis added).
- 24 • "Because the Demaray patents concern methods of depositing high quality thin films in
25 products by *using particular PVD reactor configurations, and are not directed at*
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1 *general PVD reactors standing alone, Applied is not a defendant* in the Texas cases.”

2 *Id.* at 4:22-24 (emphasis added).

- 3 • “*Intel and Samsung actually use the claimed methods* and determine the processes
4 used to deposit thin films in their semiconductor fabrication plants, *having made the*
5 *choice to use the claimed pulsed DC power supply coupled to the target, RF bias on*
6 *the substrate and a narrow band rejection filter* as set forth in the Demaray patent
7 claims.” *Id.* at 4:24-28 (emphasis added).
- 8 • “*Applied’s reactors standing alone, in contrast, have many potential non-infringing*
9 *configurations* and Applied has not alleged that it recommends or configures its PVD
10 reactors as required by the claims.” *Id.* at 4:28-5:2 (emphasis added).
- 11 • “*Nor did Demaray accuse Applied PVD reactors standing alone of infringement* in
12 the Texas cases—Demaray accused particular reactor configurations, and methods of
13 depositing thin films using them, of infringement in the Texas cases...” *Id.* at 5:26-6:1
14 (emphasis added).
- 15 • “In particular, Intel’s and Samsung’s use of a pulsed DC power supply coupled to the
16 target, RF bias on the substrate and a narrow band rejection filter to deposit high quality
17 thin films in its semiconductor devices is accused. The Applied Endura reactors are
18 merely examples of a PVD reactor configurable by third parties in an infringing manner.
19 *This is not a case where one entity makes an infringing product, and its customers*
20 *are then sued for nothing more than purchasing and using it in the only way*
21 *possible.*” 6:4-9 (emphasis added).

22 43. Two weeks later, on October 9, 2020, Demaray served its infringement contentions in the
23 Customer Suits. On October 14, 2020, Applied requested that Demaray provide the contentions to
24 Applied, as Applied believed that the scope of the infringement allegations was relevant to the
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1 pending injunction motion. Demaray refused. A true and correct copy of the parties'
2 correspondence is attached as Exhibit S. On information and belief, Demaray sought to preclude
3 Applied from obtaining and submitting the infringement contentions to this Court, recognizing that
4 they likely would undermine the positions taken in opposing Applied's motion for preliminary
5 injunction and representations that its infringement allegations were directed to post-installation
6 configurations by Applied's customers to the accused reactors. Applied eventually obtained public
7 versions of the contentions after Samsung and Intel objected to Demaray's improper confidentiality
8 designations and the Court ruled on those objections. Exs. C, D.

10 44. Contrary to the bulleted representations to this Court identified above in Demaray's
11 challenge to subject matter jurisdiction, but consistent with the Customer Complaints, Demaray's
12 contentions *failed to make any allegation* that Intel and Samsung make post-installations
13 modifications to the relevant hardware in the reactors supplied by Applied, such as the power
14 supplies coupled to the target or substrate, or any filters between the power supply and the target.
15 Like the Customer Complaints, the contentions repeatedly cite to the same sources of information
16 from Applied's products, materials, literature, and website. For example, Claim 1 of the '276
17 reactor patent relies exclusively on Applied's products, materials, literature, and website.

19 45. On October 9, 2020, in support of Applied's motion for preliminary injunction, declarations
20 from Intel, Samsung and Applied were submitted rebutting Demaray's allegations that Intel and
21 Samsung "configure the reactors" in an allegedly infringing manner. DJ Action, Dkt. No. 26-12 at
22 ¶¶ 15–16; Dkt. No. 26-8 at ¶¶ 10–11; Dkt. No. 26-10 at ¶ 12. Accordingly, on information and
23 belief, as of October 9, 2020, Demaray was on notice that Intel and Samsung did not perform the
24 post-modification configurations it alleged in seeking to distinguish Intel and Samsung's alleged
25 infringement from any allegations that would be directed at Applied.
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1 46. Between November 18, 2020 and November 30, 2020, Applied and Demaray held multiple
2 conferences exchanged multiple correspondence where Applied repeatedly asked Demaray
3 whether it intended to file compulsory counterclaims of infringement against Applied in the DJ
4 Action. Demaray refused to confirm that it would not file infringement claims against Applied,
5 claiming it needed discovery from Applied. Applied also asked Demaray whether it would provide
6 Applied with a covenant not to sue, but Demaray has not provided one. Ex. E.

7
8 47. In the parties Joint Case Management Conference Statement, submitted on November 30,
9 2020, Demaray continued its refusal to inform Applied and the Court as to whether it would file
10 claims of infringement against Applied. DJ Action, Dkt. No. 40, p. 6:7-11 (“The most appropriate
11 course (and the one provided for by the Federal Rules) is to resolve Demaray’s pending motion and
12 then, only if necessary after resolution of the motion, allow targeted discovery of information from
13 Applied regarding matters such as [Applied’s] configurations of PVD reactors that Applied makes,
14 sells and uses. Demaray could then, if it turns out to be necessary, promptly address whether
15 counterclaims for infringement are appropriate in this case.”). Demaray also continued to
16 misrepresent the allegations in its infringement contentions to this Court by stating they were
17 “based on confidential reverse engineer[ing] reports detailing Intel’s and Samsung’s infringing use
18 of the claimed reactor configurations.” *Id.* at 5:26-27.

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21 48. Demaray objected to Applied’s submission of the contentions to the Court, *see id.* at 4:24-
22 28, but as they show, there is no reference to confidential reverse engineering reports of its
23 infringement claims. *Compare* Exs. C and D with DJ Action, Dkt. No. 40, p. 5:15-22 (“Demaray
24 relied upon, among other sources, confidential reverse engineering of Intel and Samsung products
25 suggesting Intel’s and Samsung’s use of the infringing reactor configurations, including the use of
26 a narrow band-rejection filter and pulsed DC power supply. Applied ignores this reverse
27 engineering support for Demaray’s allegations against Intel and Samsung products. Demaray’s
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1 allegations in the Texas complaints Demaray did not accused Applied's reactors standing alone of
2 infringement and has made no express or implied infringement assertions against Applied in the
3 Texas complaints or anywhere else.")

4 49. Less than two weeks later, on December 12, 2020, Demaray took further affirmative acts
5 directed at Applied by serving Applied with subpoenas for the production of documents and
6 deposition testimony in the Customer Suits to determine whether Applied and its reactors supplied
7 to Intel and Samsung allegedly infringe. Exs. F and G. The subpoenas were directed at "each
8 Applied reactor supplied to Intel or Samsung with a RMS PVD chamber" and specifically requested
9 documents and deposition testimony regarding *Applied's configuration* (not Intel's or Samsung's
10 configuration) of the reactors. Demaray subsequently confirmed in correspondence to the Court in
11 the Customer Suits on December 20, 2020 that the discovery sought was "necessary to determine
12 which reactors are in dispute" (*i.e.*, which reactors allegedly infringe) and that it sought discovery
13 from Applied "[g]iven Applied's involvement in the development, manufacture, assembly and
14 installation of reactors which are then used by Intel/Samsung in an infringing manner." Ex. H.

15 50. The additional affirmative acts of serving subpoenas on Applied seeking discovery
16 regarding *Applied's configurations* of its reactors supplied to Intel and Samsung, and not
17 Intel/Samsung's alleged post-installation modifications or configurations of the reactors, "to
18 determine which reactors are in dispute" further cement that an actual case or controversy of real
19 sufficient and immediacy and reality exists between Demaray and Applied. The subpoenas further
20 contradict Demaray's prior representations to this Court that the allegations in the Customer
21 Complaints were directed to Samsung and Intel's alleged post-installation configurations of
22 Applied's reactors and confirm that the Customer Complaints, objectively interpreted, made an
23 implied assertion of infringement against Applied.
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1 51. On information and belief, Demaray knows, and always has known including at the time it
2 filed the Customer Suits, that Intel and Samsung used the accused reactors as manufactured, sold
3 and installed by Applied, such that any allegations against Intel and Samsung based on their use of
4 the reactors are implicit allegations against Applied for its design, testing, development,
5 manufacture and sale of the same reactors for the same alleged reasons.
6

7 52. Under the totality of the evidence and the facts that exist today, which include: (i) the
8 commercial realities of the relationship between Applied and its customers using Applied's
9 products; (ii) Demaray's exclusive reliance on Applied's products in the Customer Complaints;
10 (iii) Demaray's infringement contentions in the Customer Suits; (iv) Applied's customers'
11 confirmation that they do not perform the post-installation modifications to Applied's reactors that
12 Demaray contended took place; (v) Demaray's refusal to grant Applied a covenant not to sue; (vi)
13 Demaray's refusal to inform Applied or the Court in the DJ Action whether it will assert
14 compulsory counterclaims; (vii) Demaray's requests to obtain discovery from Applied to determine
15 if Applied allegedly infringes; (viii) Demaray's serving of subpoenas to Applied for discovery
16 regarding the reactors it supplies to Intel and Samsung, including Applied's configurations of the
17 hardware components Demaray previously alleged that Intel and Samsung configures on their own;
18 and (ix) Demaray's representations in the Customer Suits that the discovery from Applied is
19 necessary to determine which reactors allegedly infringe—there is a substantial controversy
20 between the parties having adverse legal interests, of sufficient immediacy and reality regarding
21 the Asserted Patents. There is a reasonable potential that Demaray could accuse Applied of
22 infringement based on the same allegations, including for direct and indirect infringement claims.
23

24 53. For example, direct infringement claims against Applied could be brought based on making,
25 offering to sell, or selling the same reactors that Demaray continues to accuse in the Customer Suits.
26 Indeed, Demaray has affirmatively sought discovery from Applied to confirm whether these
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1 reactors *as supplied* to Intel and Samsung allegedly infringe, including specific requests regarding
2 Applied's sale of the reactors supplied to Intel or Samsung. Ex. F (Transfer Request 2: "All sales
3 documents for each Applied reactor supplied to Intel or Samsung with a RMS PVD chamber,
4 including without limitation, purchase orders, fulfillment documents and documents identifying the
5 location of the sale, delivery, and installation of such reactors."). On information and belief,
6 Demaray does not allege that Applied's customers infringe based on **their purchase of the**
7 **reactors**; thus, any manufacturer of reactors supplied to customers such as Intel and Samsung
8 would objectively and reasonably interpret Demaray's affirmative acts of seeking discovery
9 regarding Applied's **sales of reactors** as seeking evidence of Applied's alleged infringement (and
10 not that of Applied's customers). Moreover, Applied objectively and reasonably believes this to
11 be true. Based on Demaray's subpoena in addition to all of its other affirmative acts originating
12 from its filing of the Customer Suits up and through its communications or other interactions with
13 Applied to this day, a substantial controversy exists between Demaray and Applied having adverse
14 legal interests regarding the infringement of the Asserted Patents. That controversy has and
15 continues to exist such that Applied is entitled to seek declaratory relief.

18 54. Demaray may also assert direct infringement claims against Applied based on Applied's
19 own use of the same reactors accused in the Customer Suits. On information and belief, Demaray
20 continues to accuse Samsung and Intel of infringing the '276 reactor patent and the '657 process
21 patent based on their use of the Cirrus and CuBs chambers in Applied's Endura product line for the
22 deposition titanium nitride and tantalum nitride layers. The same accused chambers for the same
23 accused applications (*i.e.*, deposition of titanium nitride and tantalum nitride layers) are used by
24 Applied in its laboratory facilities in the Northern District of California for research and
25 development and demonstration purposes for its customers.
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1 55. Moreover, based on the totality of the facts that exist at present-day, including each of the
2 affirmative acts taken by Demaray since the filing of the Customer Complaints, there is a reasonable
3 potential that Demaray could bring indirect infringement claims against Applied based on alleged
4 inducement. For example, Demaray may allege that Applied has had knowledge of the Asserted
5 Patents since at least Applied's filing of the DJ Action. As of at least October 9, 2020, Demaray
6 has known that Applied's customers do not perform the post-installation modifications that
7 Demaray represented to this Court were the bases for its infringement allegations in the Customer
8 Complaints. Yet Demaray has not withdrawn those Customer Complaints, and continues to
9 prosecute them, including by seeking discovery directly from Applied regarding *Applied's*
10 *configurations* of the accused reactors. Knowing that Applied's customers use the accused Applied
11 reactors as manufactured and supplied to them, Demaray is already necessarily alleging that
12 Applied intentionally causes, encourages, or aids Intel and Samsung to infringe by designing,
13 developing, manufacturing, assembling, and installing the reactor systems to fit their specific needs.
14 *See, e.g.,* Exs. C, D (infringement contentions); Exs. F, G (subpoenas to Applied).
15

16
17 56. Likewise, as to contributory infringement, there is a reasonable potential that Demaray
18 could allege that Applied's reactors are used to commit acts of direct infringement (Demaray
19 alleges Applied's reactors form the basis of infringement against Intel and Samsung); that use of
20 Applied's reactors constitutes a material part of the invention (Applied's reactors are highlighted
21 extensively throughout Demaray's infringement contentions); and that Applied knew its products
22 are especially made or especially adapted for use in an infringement of the Asserted Patents
23 (Demaray's allegations against Intel and Samsung have now put Applied on notice of Demaray's
24 belief that the reactors are allegedly used in an infringing manner).
25

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27 57. Finally, there is a reasonable potential that Demaray could allege that the reactors are not a
28 staple article or commodity of commerce suitable for substantial noninfringing use based on two

1 primary factors. First, Demaray contends that any alleged noninfringing configuration—*e.g.*, a
2 configuration without a “narrow band rejection filter”—would render the reactor inoperable and
3 self-destructing. Ex. A at ¶ 40 (“On information and belief, a narrowband filter is used in the Intel
4 RMS reactors as configured to . . . protect the pulsed DC power supply from feedback from the RF
5 bias power supply”); Ex. B at ¶ 40; *see also* Dkt. No. 23 at 4:6-8 (“The narrow band rejection filter
6 allows the power sources to properly function, but prevents damaging feedback to the pulsed DC
7 power source from the RF bias.”). Second, Demaray’s allegations that Applied’s two biggest
8 customers—the biggest chipmakers in the world—both use the alleged configurations in the same
9 manner so as to avoid damaging the reactor’s power supply suggests that this configuration is the
10 primary and substantial use of the reactor, and that any other alleged configuration is *de minimus*
11 or insubstantial.
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14 58. This Court has subject matter jurisdiction, when considering the totality of the facts that
15 exist today, which go well beyond Demaray’s filing of the Customer Complaints and Demaray’s
16 subsequent characterizations of the allegations contained therein.

17 **PERSONAL JURISDICTION AND VENUE**

18 59. This Court has personal jurisdiction over Demaray. Among other things, Demaray has
19 continuous and systematic business contacts with Northern California. Demaray’s “founder and
20 president,” Dr. Demaray, describes Demaray as a “Silicon Valley, CA” company:²
21

22 Experience:

23 **Founder and President: Demaray LLC** March 2013 – Present Silicon Valley CA

24 Intellectual Property invention and development, including licensing for thin film energy conversion and storage technologies and devices, thin
25 film optics, solar energy, photo-chemistry, solid state Li+ ion films and devices, advanced thin film coatings and devices.

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28 ² <https://www.edemaray.com/bios.html>; <https://www.linkedin.com/in/ernestdemarayphd/>.

**Founder and President**

Demaray LLC

Jan 2006 – Present · 14 yrs 7 mos

Silicon Valley CA

Intellectual Property invention and development, including licensing for thin film energy conversion and storage technologies and devices, thin film optics, solar energy, photo-chemistry, solid state Li+ ion films and devices, advanced thin film coatings and devices.

On information and belief, according to Demaray’s website, several of the Board members and employees of Demaray are from and/or based in Northern California.³ Under its “Partners” sub-page, Demaray’s website lists the University of California at Santa Cruz as one of its primary partners, and claims that “Professor Kobayashi of UCSC is working with Demaray LLC to further develop the Sun2Fiber technology with a grant from ARPA-E.”⁴ Further, on information and belief, the technology underlying the Asserted Patents was allegedly developed in Northern California.

60. In addition, this Court has personal jurisdiction over Demaray because Demaray has purposefully directed into California its enforcement activities regarding the Asserted Patents. As referenced above, Demaray has filed complaints against Intel (headquartered in Northern California)⁵ and Samsung (conducts substantial business operations related to the allegedly infringing technology in Northern California and holds a large US office in Northern California).⁶ Further, Demaray’s complaints against both Samsung and Intel accuse Applied technology, and Applied is also headquartered in Northern California.⁷ And, at least against Samsung, Demaray relies on meetings occurring in Northern California to establish alleged pre-suit notice and knowledge of the Asserted Patents, and alleged willful infringement.⁸

³ <https://www.edemaray.com/bios.html>.

⁴ <https://www.edemaray.com/partners.html>

⁵ <https://www.intel.com/content/www/us/en/support/articles/000015107/programs.html>

⁶ **Error! Hyperlink reference not valid.** <https://www.samsung.com/us/ssic/location/san-jose-ca/>

⁷ <http://www.appliedmaterials.com/company/contact/locations>

⁸ See Ex. B at ¶¶ 24–25.

1 61. Venue is proper in this District under 28 U.S.C. §§ 1391(b), (c), because a substantial part
2 of the events giving rise to Applied's claim occurred in this district, and because Demaray is subject
3 to personal jurisdiction here.

4 62. On information and belief, Dr. Demaray has filed over a hundred patents over the course of
5 his career, which has been spent almost entirely in Northern California.⁹ After receiving the entirety
6 of his education at schools located in Northern California (Cal State Hayward and the University
7 of California at Santa Cruz), Dr. Demaray has spent almost 40 years working at California-based
8 companies, including Applied Komatsu, Varian Semiconductor, Symmorphix, and Demaray.¹⁰ On
9 information and belief, Dr. Demaray and the co-inventors of the Asserted Patents conceived of the
10 alleged inventions in the Asserted Patents using the confidential information, intellectual property,
11 and equipment of their former employers, Applied and Applied Komatsu.

12
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14 63. On information and belief, in addition to Dr. Demaray, Ravi Mullapudi, one of the other
15 named inventors of the Asserted Patents, also resides in Northern California. On information and
16 belief, Gary Edwards, the patent prosecution attorney for the Asserted Patents, resides in Northern
17 California.¹¹ Further, on information and belief, the research and development of the Asserted
18 Patents was performed in Northern California. On information and belief, the Sales and
19 Relationship Agreement between Applied Komatsu and Symmorphix, which granted Applied a
20 license to the Asserted Patents, as detailed *infra*, was negotiated and executed in Northern
21 California. Likewise, on information and belief, the majority of the individuals involved in the
22 negotiations on behalf of Applied Komatsu and Symmorphix that led to the SRA are located in
23 Northern California, including Larry Edelman, Jim Scholer, James Sponseller, and Mike Danaher.

24
25 **FACTUAL BACKGROUND**

26
27 ⁹ <https://www.linkedin.com/in/ernestdemarayphd/>

28 ¹⁰ *Id.*

¹¹ <https://www.haynesboone.com/people/e/edwards-gary>

1 64. Demaray, its principals and predecessor companies, on the one hand, and Applied and
2 Applied Komatsu, on the other hand, have a long history together, including as it relates to the
3 Asserted Patents.

4 65. On information and belief, Dr. Demaray was a general manager of a joint venture between
5 Applied and Komatsu Ltd., called Applied Komatsu Technology, Inc. (“AKT”), developing
6 sputtered silicon deposition technology.¹² On information and belief, Dr. Demaray, and other
7 employees working with Dr. Demaray, were working in Northern California and employed by
8 AKT’s subsidiary, AKTA (collectively, AKT and AKTA are referred to herein as “Applied
9 Komatsu”).
10

11 66. On information and belief, Dr. Demaray, along with several other colleagues from Applied
12 and/or Applied Komatsu left in late 1998 to start a new company, Symmorphix. On information
13 and belief, Dr. Demaray was a founder, Chairman of the Board, and CTO of Symmorphix.¹³
14

15 67. On information and belief, at Symmorphix, Dr. Demaray and his team of former Applied
16 or Applied Komatsu employees continued to develop the technology they worked on at Applied or
17 Applied Komatsu related to sputtered silicon deposition technology.

18 68. On December 11, 1998, Applied Komatsu and Symmorphix negotiated and executed a Sale
19 and Relationship Agreement (“SRA”) to govern the parties’ future commercial relationship,
20 including as it relates to the purchase and sale of Applied Komatsu reactor systems, Symmorphix’s
21 use of Applied Komatsu’s facilities, and the parties’ respective intellectual property rights resulting
22 from the parties’ commercial arrangement. *See* Ex. I.¹⁴
23

24
25
26 ¹² <https://www.linkedin.com/in/ernestdemarayphd/>

27 ¹³ <https://www.linkedin.com/public-profile/in/ernestdemarayphd/>; DJ Action, Dkt. No. 23-1 at ¶
5.

28 ¹⁴ Ex. I has been redacted to remove confidential financial information and to remove hand-written notes from the copy of the SRA maintained by Applied in its business records.

1 69. Pursuant to the SRA, Applied Komatsu agreed to sell, and Symmorphix agreed to purchase,
2 certain PVD reactor systems developed by Applied Komatsu. *Id.* at ¶¶ 1–3. Applied Komatsu also
3 agreed to provide Symmorphix with access to Applied Komatsu’s facilities through and including
4 April 30, 1999. *id.* at ¶ 6, and the SRA specifically permitted access to certain former Applied
5 Komatsu employees, including Dr. Demaray and Ravi Mullapudi, *id.* at ¶ 9—two of the named
6 inventors of the Asserted Patents.¹⁵ Other provisions of the SRA governed other aspects of the
7 parties’ commercial relationship, including solicitation prohibitions, required insurance coverages
8 and licenses, shipping and receiving, environmental and hazardous waste policies, worksite
9 training, and costs and expenses associated with the facilities and equipment. *Id.* at ¶¶ 10–20.

11 70. Paragraph 21 of the SRA also makes reference to and incorporates “Exhibit C” into the
12 SRA, which relates to, among other things, intellectual property rights and licenses: “The parties
13 have agreed to certain provisions regarding future dealings, intellectual property, confidential
14 information, and licenses, as described in Exhibit C, attached hereto and made part of this
15 Agreement.” *Id.* at ¶ 21. There are two documents titled “Exhibit C”: the one executed December
16 11, 1998, and attached to the SRA (“Original Exhibit C”), and a modified Exhibit C that was
17 executed on January 27, 1999 (“Modified Exhibit C”), which supersedes the Original Exhibit C.
18 *See* Ex. J (Original Exhibit C) and Ex. K (Modified Exhibit C).

21 71. The Original Exhibit C provided Symmorphix the right to first refusal of certain PVD
22 systems, and provided Applied Komatsu the first right to apply any sputtered silicon PVD systems,
23 spares, and upgrades. It also provided certain license grants between the parties: (1) Applied
24 Komatsu granted Symmorphix a license to Applied Komatsu’s patent rights to use with products

26 ¹⁵ Symmorphix continued using the Applied Komatsu facilities and equipment until at least
27 September 30, 1999, as evidenced by the “First Addendum to Sales and Relationship Agreement”
28 and “Second Addendum to the Sale and Relationship Agreement.” (True and correct copies of the
Addendums to the SRA are attached hereto as Exhibit L.)

1 purchased from or supplied by Applied Komatsu; and (2) Symmorphix granted Applied Komatsu
2 a license to patent rights relating to sputtered silicon deposition technology, with an approximate
3 two year time window, but with also a non-compete provision that “AKTA shall not utilize such
4 rights to pursue the same product objectives concerning flat panel displays as Symmorphix”:

5
6 a) **AKTA grants to Symmorphix** a non-assignable, non-transferable, non-
7 exclusive, royalty free license to use, with products purchased from or supplied by
8 AKTA (“Products”), patented methods and processes of AKTA which are
9 appropriately utilizable in the Products, and to AKTA’s rights under any patents,
10 inventions, or technology relating to sputtered silicon deposition technology owned
11 by AKTA, for the purposes of providing sputtered silicon deposition services
12 (“Services”). This license does not extend to the use of any of AKTA’s patented
13 methods or processes in products not purchased from or supplied by AKTA or in
14 Products which have been substantially altered by any third party except
15 Symmorphix.

16 b) **Symmorphix grants to AKTA** a non-assignable, non-transferable, non-
17 exclusive, royalty-free license to any rights of Symmorphix under any patents
18 issues based on any patent applications filed before January 1, 2001, for inventions,
19 improvements, or enhancements developed by Symmorphix relating to sputtered
20 silicon deposition technology, provided that AKTA shall not utilize such rights to
21 pursue the same product objectives concerning flat panel displays as Symmorphix.
22 Notwithstanding the generality of the foregoing, AKTA shall be authorized to
23 assign or transfer any or all of the above license to one or more of AKTA’s parent
24 entities, with the same restriction on competition with the Services provided by
25 Symmorphix, and AKTA’s customers may use equipment provided by AKTA
26 incorporating inventions licensed to AKTA hereunder without further
27 consideration.

19 Ex. J (Original Exhibit C at ¶ 3) (emphasis added).

20 72. Original Exhibit C also set forth the parties’ agreement regarding the parties’ respective
21 rights in connection with the assignment provisions in the former Applied Komatsu employment
22 agreements. On information and belief, and according to the sworn declaration of Dr. Demaray,
23 “[a]s part of the [SRA], Applied Komatsu agreed to release [Dr. Demaray] and the other former
24 employees joining Symmorphix from assignment provisions in certain employment agreements.”
25 DJ Action, Dkt. No. 23-1 at ¶ 6. A true and correct copy of Dr. Demaray’s sworn declaration is
26 also attached as Exhibit M.
27
28

1 73. Specifically, paragraph 4 of Original Exhibit C acknowledged the “presumption ... that
2 AKTA owns all inventions disclosed by AKTA employees and related to the work done for AKTA
3 after leaving AKTA employment”, and *notwithstanding the presumption*, the parties agreed that
4 Applied Komatsu would continue to retain intellectual property rights assigned by former
5 employees that were conceived or developed during the period of their employment with Applied
6 Komatsu (*i.e.*, on or before December 31, 1998), but that inventions conceived by Symmorphix on
7 or after January 1, 1999, cannot be claimed by Applied Komatsu (with the exception of the rights
8 granted in the license described above):
9

10 4. Symmorphix understands and agrees that intellectual property conceived or
11 received by AKTA employees (including those individuals named in Section 9 of
12 this Agreement) during the period of their respective employment is owned by
13 AKTA, pursuant to individual written agreements with AKTA. Nothing in this
14 Agreement shall transfer any ownership right in any intellectual property owned by
15 AKTA, including all rights contained in patent applications and inventions
16 disclosures held by AKTA. Notwithstanding the presumption, contained within
17 those certain written agreements with AKTA, that AKTA owns all inventions
18 disclosed by AKTA employees and related to the work done for AKTA after
19 leaving AKTA employment, the parties hereto agree that:

- 20 • Any invention in the field of sputtered silicon deposition technology
21 conceived or developed by any of the individuals named in Section 9 of this
22 Agreement on or before December 31, 1998, shall be owned by AKTA;
- 23 • Symmorphix and AKTA shall cooperate to provide any documentation,
24 filing, and execution required to fulfill or effect this provision, including
25 specifically all patent matters;
- 26 • AKTA does not own and shall not claim any right (other than the license
27 grant to AKTA detailed in Section 3 of this Exhibit C of this Agreement) to
28 intellectual property developed by Symmorphix on or after January 1, 1999;
- AKTA does not own and shall not claim any right in any other proprietary
property of Symmorphix which was developed by or for Symmorphix on or
after November 1, 1998, including without limitation business plans and
company organization of Symmorphix.

Ex. J (Original Exhibit C at ¶ 4).

74. On information and belief, after the parties signed the SRA on December 11, 1998
(including Original Exhibit C), Symmorphix approached Applied Komatsu on January 11, 1999,

1 requesting to amend Original Exhibit C relating to the license grant to Applied Komatsu. True and
2 correct copies of the correspondence from Symmorphix and draft revisions to Original Exhibit C
3 are attached hereto as Exhibit N.

4 75. On information and belief, Symmorphix's stated concern was that the existing license grant
5 flowing from Symmorphix to Applied Komatsu at paragraph 3(b) of the Original Exhibit C "may
6 allow [Applied Komatsu] to use Symmorphix's patents to compete with Symmorphix in flat panel
7 displays," which Symmorphix viewed as discouraging it from filing patents for its inventions. *Id.*

8 76. On information and belief, in order to encourage Symmorphix's filing for patents in the
9 sputtered silicon space, Symmorphix proposed to amend the license grant, which in turn,
10 Symmorphix asserted, would benefit Applied by producing more patents that would be subject to
11 the license grant:
12

13
14 Paragraph 3b) discourages Symmorphix from filing patents regarding sputtered
15 silicon. Keeping Symmorphix' innovations trade secrets only poses the risk that
16 another equipment vendor could independently develop and patent similar
17 innovations. ***I believe that Applied Materials would like Symmorphix' sputtered
18 silicon innovations to be patented (hence, protected) and may appreciate a
19 license. I suggest that paragraph 3b) be revised to restrict the license of
20 Symmorphix' patents back to AKTA (and AKTA's parents) for use on silicon
21 wafers for semiconductors.*** This would still provide a "balanced agreement",
22 which was one of Larry Edelman's objectives - i.e., offset paragraph 3a) with 3b)
23 – as paragraph 3a) is narrow. (Its purpose is only to allow Symmorphix to use
24 AKT's sputtered silicon technology with systems we purchase from AKT and be
25 able to modify the system).

26 Ex. N (emphasis added).

27 77. On information and belief, the ensuing negotiations culminated in the execution of the
28 Modified Exhibit C, which made the following material changes, among others: (1) it clarified
and/or expanded Symmorphix's license rights to AKTA's; (2) it removed the "before January 1,
2001" temporal limitation of Applied Komatsu's license rights while also prohibiting Applied
Komatsu from using such rights to pursue a business providing "sputtered silicon deposition
services" (*i.e.*, a broader non-compete provision); and (3) it further limited the scope of Applied

1 Komatsu’s license rights such that the rights could not be derived from Symmorphix personnel who
2 were not previously Applied Komatsu employees (*i.e.*, Applied Komatsu’s license rights are only
3 implicated by inventions from former Applied Komatsu employees who left and joined
4 Symmorphix, and to the exclusion of Symmorphix personnel who never had Employment
5 Agreements having relevant assignment provisions with Applied Komatsu). *See* Ex. K at ¶ 3(a),
6 3(b).

7
8 78. A comparison between the license provisions (paragraphs 3.a and 3.b) of Original Exhibit
9 C and Modified Exhibit C is presented below (with green representing added language and red
10 representing deleted language) to illustrate the negotiated and agreed-to changes appearing in
11 Modified Exhibit C:

12
13 a. AKTA grants to Symmorphix a non-assignable, non-transferable, non-exclusive,
14 perpetual, royalty free license to use, with equipment and associated software
15 documentation with-products purchased from or supplied by or for AKTA
16 (“Products”), patented methods and processes of AKTA which are appropriately
17 utilizable in the Products, and to AKTA’s rights under any patents, patent
18 applications, inventions, or technology relating to sputtered silicon deposition
19 technology owned by or licensed to AKTA wherein such license contains the right
20 to sub-license without cost to AKTA, or where the license contains a provision to
21 sub-license with cost, Symmorphix may choose to pay the royalty thereunder to use
22 such license, including the inventions and intellectual property referred to in
23 Section 4 of this Exhibit C of this Agreement, for the purposes of providing
24 sputtered silicon deposition services (“Services”). This license does not extend to
25 the use of any of AKTA’s patented methods or processes in products not purchased
26 from or supplied by or for AKTA or in Products which have been substantially
27 altered by any third party except Symmorphix.

28
29 b. To the extent required by existing AKTA Employee Agreements with any
30 Symmorphix personnel, Symmorphix grants to AKTA a non-assignable, non-
31 transferable, non-exclusive, perpetual, royalty-free license to any rights of
32 Symmorphix under any patents issues based on any patent applications filed before
33 January 1, 2001, for inventions, improvements, or enhancements developed by
34 Symmorphix relating to sputtered silicon deposition technology, provided that
35 AKTA shall not utilize such rights to pursue a business of providing Services the
36 same product objectives concerning flat panel displays as
37 Symmorphix. Notwithstanding the generality of the foregoing, AKTA shall be
38 authorized to assign or transfer any or all of the above license to one or more of
39 AKTA’s parent entities, with the same restriction on competition with the Services
40 provided by Symmorphix, and AKTA’s customers may use equipment provided by

1 AKTA incorporating inventions licensed to AKTA hereunder without further
2 consideration.

3 79. On information and belief, as described, the purpose of the additional lead-in language at
4 paragraph 3(b)—“To the extent required by existing AKTA Employee Agreements with any
5 Symmorphix personnel”—was to further limit the scope of the license from Symmorphix back to
6 Applied Komatsu and its parent subsidiaries (*e.g.*, Applied) to only inventions derived from former
7 Applied Komatsu employees, and not from Symmorphix employees who did not come from
8 Applied Komatsu.

9 80. On information and belief, the lead-in language was proposed by Symmorphix at the
10 suggestion of Symmorphix’s corporate counsel, Michael Danaher, and intended to limit the scope
11 of the license to inventions derive from the former Applied Komatsu employees having invention
12 assignment provisions in their Employment Agreements. On information and belief, Symmorphix,
13 including its executives and founders Bob Conner and Dr. Demaray, understood this to be the intent
14 of the lead-in-language, and communicated this intent to AKT in renegotiating the provisions of
15 Original Exhibit C.
16

17 81. On information and belief, Symmorphix, including its executives and founders Bob Conner
18 and Dr. Demaray, understood that the intent of the lead-in language was **not** to condition the license
19 grant in Paragraph 3(b) to the validity or enforceability of the assignment provisions in the
20 employment agreements of the former Applied Komatsu employees. On information and belief,
21 Symmorphix never communicated to AKT that the intent of the lead-in language was to condition
22 the license grant in Paragraph 3(b) to the validity or enforceability of the assignment provisions in
23 the employment agreements of the former Applied Komatsu employees.
24

25 82. On information and belief, the parties already bargained for the release of the assignment
26 provisions in the employment agreements as part of the SRA, as confirmed by Dr. Demaray’s sworn
27 declaration. Ex. M at ¶ 6. While Dr. Demaray’s declaration acknowledged the bargained for
28

1 release, Dr. Demaray ignores the clause within the release that makes clear that Applied Komatsu
2 retains the rights in the license granted in the license provision of Section 3 of Exhibit C:

3 Notwithstanding the presumption, contained within those certain written
4 agreements with AKTA, that AKTA owns all inventions disclosed by AKTA
5 employees and related to the work done for AKTA after leaving AKTA
6 employment, the parties hereto agree that:

- 6 ...
- 7 • AKTA does not own and shall not claim any right (**other than the license**
8 **grant to AKTA detailed in Section 3 of this Exhibit C of this**
9 **Agreement**) to intellectual property developed by Symmorphix on or after
10 January 1, 1999;
- 11 ...

10 Ex. J, ¶ 4 (emphasis added); compare Ex. K (unchanged in Modified Exhibit C).

11 83. On information and belief, following the execution of the Modified Exhibit C to the SRA,
12 the license granted by Symmorphix to Applied Komatsu and Applied remained valid and
13 enforceable up and through present day, and provides a license to Applied to the Asserted Patents
14 which also covers the use by Applied's customers of Applied's equipment.

15 84. On information and belief, no Court, including the District Court of the Northern District
16 of California in *Applied Materials, Inc. v. Advanced Micro-Fabrication Equip. (Shanghai) Co.*, 630
17 F. Supp. 2d 1084, 1090 (N.D. Cal. May 20, 2009), has found the license granted by Symmorphix
18 to Applied Komatsu invalid, void or unenforceable.

19 85. On information and belief, the SRA was negotiated between two sophisticated commercial
20 entities, represented by counsel, that entered into an arms' length commercial contract permitting
21 Symmorphix to continue using Applied Komatsu's equipment and intellectual property to develop
22 its own, provided that certain rights, including a license to certain Symmorphix patents (which
23 include the later filed and issued Asserted Patents), be granted to Applied Komatsu in return.

24 86. On information and belief, the rights and benefits granted to Symmorphix that it bargained
25 for in the SRA facilitated the conception and reduction to practice of the alleged inventions filed
26
27
28

1 for on March 16, 2002, in U.S. Patent Application No. 10/101,863 (“’863 Application”), naming
2 Richard E. Demaray, Hongmei Zhang, Mukundan Narasimhan, and Ravi Mullapudi as named
3 inventors.

4 87. On October 1, 2004, U.S. Patent Application No. 10/954,182 was filed as a continuation
5 application of the ’863 Application naming Richard E. Demaray, Hongmei Zhang, Mukundan
6 Narasimhan, and Ravi Mullapudi as named inventors. On June 3, 2008, this application issued as
7 U.S. Patent No. 7,381,657. A true and correct copy of the ’657 patent is attached hereto as Exhibit
8 O.

9
10 88. On September 16, 2005, U.S. Patent Application No. 11/228,834 was filed as a divisional
11 application of the ’863 Application naming Richard E. Demaray, Hongmei Zhang, Mukundan
12 Narasimhan, and Ravi Mullapudi as named inventors. On June 9, 2009, this application issued as
13 U.S. Patent No. 7,544,276. A true and correct copy of the ’276 patent is attached hereto as Exhibit
14 P.

15
16 89. On information and belief, one or more of the named inventors who left Applied Komatsu
17 to work at Symmorphix, including at least Ravi Mullapudi, had the following assignment provision
18 in their Applied Komatsu Employee Agreement, such that the ’657 patent and the ’276 patent (the
19 Asserted Patents) fall within the scope of the license granted to Applied Komatsu under paragraph
20 3(b) of Modified Exhibit C:

21
22 In case any invention is described in a patent application or is disclosed to
23 third parties by me after terminating my employment with [Applied
24 Komatsu], it is to be presumed that the invention was conceived or made
25 during the period of my employment for [Applied Komatsu], and the
26 invention will be assigned to [Applied Komatsu] as provided by this
27 Agreement, provided it relates to my work with [Applied Komatsu] or any
28 of its subsidiaries.

89. On information and belief, Mukundan Narasimhan (“Narasimhan”), one of the other named
inventors, left Applied to join Symmorphix on April 16, 2001. On information and belief,

1 hardware components Demaray previously alleged that Intel and Samsung configures on their own;
2 and (ix) Demaray’s representations in the Customer Suits that the discovery from Applied is
3 necessary to determine which reactors allegedly infringe—there is a substantial, immediate, and
4 real controversy that exists between Applied and Demaray regarding whether Applied and
5 Applied’s reactors infringe or have infringed the ’276 patent. A judicial declaration is necessary to
6 determine the parties’ respective rights regarding the ’276 patent.
7

8 94. Applied’s reactors in the Endura product line that have been identified and accused in the
9 Customer Suits do not directly or indirectly infringe any claim of the ’276 patent. To the best of
10 Applied’s knowledge, no third party, including Intel, Samsung and any other customer of Applied,
11 infringes any claim of the ’276 patent by using Applied’s reactors in the Endura product line.
12 Applied has not caused, directed, requested, or facilitated any such infringement, much less with
13 specific intent to do so. Applied’s reactors in the Endura product line are not designed for use in
14 any combination which infringes any claim of the ’276 patent. To the contrary, each is a product
15 with substantial uses that does not infringe any claim of the ’276 patent.
16

17 95. Applied seeks a judgment declaring that Applied’s reactors, including those in the Endura
18 product line, do not directly or indirectly infringe any claim of the ’276 patent. In its complaints
19 against Applied’s customers, Demaray cites to Applied’s Endura products as purported evidence
20 of infringement of claim 1 of the ’276 patent. Based on Applied’s present understanding of claim
21 1 of the ’276 patent and Demaray’s allegations, Applied’s Endura products fail to meet or embody
22 limitations of claim 1 of the ’276 patent. For example, claim 1 recites a reactor comprising, in part,
23 “a pulsed DC power supply coupled to the target area” and “a narrow band-rejection filter that
24 rejects at a frequency of the [RF] bias power supply coupled between the pulsed DC power supply
25 and the target area.” Applied’s Endura products do not infringe claim 1 of the ’276 patent at least
26 because these products do not meet or embody a reactor comprising “a pulsed DC power supply
27
28

1 coupled to the target area” and/or “a narrow band-rejection filter that rejects at a frequency of the
2 [RF] bias power supply coupled between the pulsed DC power supply and the target area.”
3

4
5 **SECOND COUNT**
6 **(Declaration of Non-Infringement of U.S. Patent No. 7,381,657)**

7
8 96. Applied restates and incorporates by reference all allegations in this Complaint as if fully
9 set forth herein.

10 97. Demaray claims to own all rights, title, and interest, including the right to seek damages for
11 past, present, and future infringement thereof, in the '657 patent.

12 98. Under the totality of the evidence and the facts that exist today, which include: (i) the
13 commercial realities of the relationship between Applied and its customers using Applied's
14 products; (ii) Demaray's exclusive reliance on Applied's products in the Customer Complaints;
15 (iii) Demaray's infringement contentions in the Customer Suits; (iv) Applied's customers'
16 confirmation that they do not perform the post-installation modifications to Applied's reactors that
17 Demaray contended took place; (v) Demaray's refusal to grant Applied a covenant not to sue; (vi)
18 Demaray's refusal to inform Applied or the Court in the DJ Action whether it will assert
19 compulsory counterclaims; (vii) Demaray's requests to obtain discovery from Applied to determine
20 if Applied allegedly infringes; (viii) Demaray's serving of subpoenas to Applied for discovery
21 regarding the reactors it supplies to Intel and Samsung, including Applied's configurations of the
22 hardware components Demaray previously alleged that Intel and Samsung configures on their own;
23 and (ix) Demaray's representations in the Customer Suits that the discovery from Applied is
24 necessary to determine which reactors allegedly infringe—there is a substantial, immediate, and
25 real controversy that exists between Applied and Demaray regarding whether Applied and
26 Applied's reactors infringe or have infringed the '657 patent. A judicial declaration is necessary to
27 determine the parties' respective rights regarding the '657 patent.
28

1 99. Applied's reactors in the Endura product line that have been identified and accused in the
2 Customer Suits do not directly or indirectly infringe any claim of the '657 patent. To the best of
3 Applied's knowledge, no third party, including Intel, Samsung and any other customer of Applied,
4 infringes any claim of the ' 657 patent by using Applied's reactors in the Endura product line.
5 Applied has not caused, directed, requested, or facilitated any such infringement, much less with
6 specific intent to do so. Applied's reactors in the Endura product line are not designed for use in
7 any combination which infringes any claim of the '657 patent. To the contrary, each is a product
8 with substantial uses that does not infringe any claim of the '657 patent.

10 100. Applied seeks a judgment declaring that Applied's reactors, including those in the
11 Endura product line, do not directly or indirectly infringe any claim of the '657 patent. In its
12 complaints against Applied's customers, Demaray cites to Applied's Endura products as purported
13 evidence of infringement of claim 1 of the '657 patent. Based on Applied's present understanding
14 of claim 1 of the '657 patent and Demaray's allegations, Applied's Endura products fail to meet or
15 embody steps of the method recited in claim 1 of the '657 patent. For example, claim 1 recites a
16 method comprising, in part, "providing pulsed DC power to the target through a narrow band
17 rejection filter such that the target alternates between positive and negative voltages" and
18 "providing an RF bias at a frequency that corresponds to the narrow band rejection filter to the
19 substrate." Using Applied's Endura products does not infringe claim 1 of the '657 patent at least
20 because these products do not comprise "providing pulsed DC power to the target through a narrow
21 band rejection filter such that the target alternates between positive and negative voltages" and/or
22 "providing an RF bias at a frequency that corresponds to the narrow band rejection filter to the
23 substrate."

24 **THIRD COUNT**
25 **(Declaration of Non-Infringement Based on License)**
26

1 101. Applied restates and incorporates by reference all allegations in this Complaint as if
2 fully set forth herein.

3 102. A substantial, immediate, and real controversy exists between Applied and Demaray
4 regarding whether Applied’s reactors infringe or have infringed the Asserted Patents. A judicial
5 declaration is necessary to determine the parties’ respective rights regarding the Asserted Patents.
6

7 103. Applied has a perpetual, royalty-free license to the Asserted Patents pursuant to the
8 terms of the SRA between Applied Komatsu and Symmorphix.

9 104. Applied Komatsu and Symmorphix executed the SRA and Modified Exhibit C,
10 agreeing that Symmorphix grants Applied Komatsu a perpetual, royalty-free license to
11 Symmorphix’s patents “based on any patent applications filed for inventions, improvements, or
12 enhancements developed by Symmorphix relating to sputtered silicon deposition technology.” Ex.
13 K at ¶ 3(b). The Asserted Patents relate to sputtered silicon deposition technology. Further, Applied
14 Komatsu is authorized to assign or transfer its license to any of Applied Komatsu’s parent entities,
15 including Applied. *Id.*
16

17 105. The SRA limits the scope of the license grant to those patents invented by former
18 Applied Komatsu employees having assignment provisions in their Employment Agreements for
19 which the parties negotiated a release in paragraph 4 of Exhibit C, subject to Applied Komatsu
20 receiving the license rights provided in paragraph 3(b). *Id.* On information and belief, at least named
21 inventor Ravi Mullapudi had an Applied Komatsu Employee Agreements with the following
22 provision:
23

24 In case any invention is described in a patent application or is disclosed to
25 third parties by me after terminating my employment with [Applied
26 Komatsu], it is to be presumed that the invention was conceived or made
27 during the period of my employment for [Applied Komatsu], and the
28 invention will be assigned to [Applied Komatsu] as provided by this
Agreement, provided it relates to my work with [Applied Komatsu] or any
of its subsidiaries.

1 106. The Asserted Patents relate to sputtered silicon deposition technology, and all four
2 named inventors are former Applied or Applied Komatsu employees. Applied is a parent entity of
3 Applied Komatsu. Under the terms of Modified Exhibit C, Applied has a perpetual, royalty-free
4 license to the Asserted Patents.

5 107. Thus, Applied holds a non-exclusive, perpetual, royalty free license to the Asserted
6 Patents by virtue of the Sales and Relationship Agreement, and its amendments, between Applied
7 Komatsu and Symmorphix. Further, Applied's customers' use of Applied's products incorporating
8 Applied's license without further consideration are similarly permitted under of the Sales and
9 Relationship Agreement, and its amendments.
10

11 108. Accordingly, Applied seeks a declaration that Applied holds a non-exclusive,
12 perpetual, royalty free license to the Asserted Patents and thus, Applied's products cannot infringe.
13

14 **FOURTH COUNT**
15 **(Declaration of Non-Infringement Based on Assignment of Rights to Applied and**
16 **Demaray's Failure to Join All Co-Owners)**

17 109. Applied restates and incorporates by reference all allegations in this Complaint as if
18 fully set forth herein.

19 110. A substantial, immediate, and real controversy exists between Applied and Demaray
20 regarding whether Applied's reactors infringe or have infringed the Asserted Patents. A judicial
21 declaration is necessary to determine the parties' respective rights regarding the Asserted Patents.

22 111. On information and belief, Narasimhan, one of the named inventors of the Asserted
23 Patents, left Applied to join Symmorphix on April 16, 2001. On information and belief,
24 Narasimhan's Employment Agreement contains the following assignment provision:

25 **In case any invention is described in a patent application or is disclosed**
26 **to third parties by me within one (1) year after terminating my**
27 **employment with APPLIED, it is to be presumed that the invention was**
28 **conceived or made during the period of my employment for APPLIED, and**
the invention will be assigned to APPLIED as provided by this
Agreement, provided it relates to my work with APPLIED or any of its
subsidiaries.

1 112. On March 16, 2002, the '863 Application, the parent patent application to the
2 Asserted Patents, was filed naming Narasimhan as one of the named inventors. The '863
3 Application was filed less than one year after Narasimhan's termination from Applied. On
4 information and belief, at Symmorphix, the named inventors continued their development work
5 from their time at Applied or Applied Komatsu related to sputtered silicon deposition technology
6 using confidential information, intellectual property and equipment of Applied or Applied
7 Komatsu.
8

9 113. On information and belief, Mr. Narasimhan's Applied Employment Agreement
10 further provides:

11 **I agree that all inventions**, copyrightable works and confidential
12 information (including but not limited to new contributions, improvements,
13 ideas or discoveries, whether patentable or not and computer source code
14 and documentation) **produced, conceived**, made or first actually reduced
15 to practice **by me solely or jointly with others** during the period of my
16 employment with APPLIED (the foregoing are subsequently referred to as
17 Creative Works), **are hereby assigned to APPLIED and shall be the**
18 **exclusive property of APPLIED.**

19 114. On information and belief, based on Demaray's interpretation of the Asserted
20 Patents in alleging infringement in the Customer Suits against Applied's customers based on their
21 use of Applied's physical vapor deposition (PVD) reactors used for the deposition of titanium
22 nitride and tantalum nitride, to the extent Narasimhan conceived, made or first actually reduce to
23 practice the purported inventions of the Asserted Patents, Narasimhan did so during the period of
24 his employment with Applied.

25 115. On information and belief, Narasimhan's assignment obligations to Applied in
26 Applied's Employment Agreement automatically assigned Narasimhan's ownership rights in the
27 Asserted Patents to Applied.

28 116. On information and belief, no Court, including the District Court of the Northern
District of California in *Applied Materials, Inc. v. Advanced Micro-Fabrication Equip. (Shanghai)*

1 Co., 630 F. Supp. 2d 1084, 1090 (N.D. Cal. May 20, 2009), has addressed whether Narasimhan's
2 assignment agreement in his Employment Agreement, including as it pertains to the assignment of
3 inventions conceived, made or first actually reduced to practice during his employment at Applied
4 or by using Applied's confidential information, is invalid, void or unenforceable.

5
6 117. Thus, Applied's products cannot infringe the Asserted Patents because the rights of
7 named inventor, Narasimhan, in the Asserted Patents were assigned to Applied, making Applied at
8 least a co-owner of the Asserted Patents that has not joined and will not join Demaray in alleging
9 infringement of the Asserted Patents.

10 118. Demaray cannot bring a claim of infringement of the Asserted Patents and is not
11 entitled to any relief without joining all co-owners. As such, Applied seeks a declaration that
12 Applied's products cannot infringe the Asserted Patents because not all co-owners are joined.

13
14 **PRAYER FOR RELIEF**

15 WHEREFORE, Applied prays for judgment and relief as follows:

16 A. Declaring that Applied's products, including those used in the Endura product line, do not
17 directly or indirectly infringe any claim of the '276 patent and enjoining Demaray, its officers,
18 agents, employees, attorneys, and all persons in active concert or participation with them, from
19 directly or indirectly charging infringement, or instituting further action for infringement, of the to
20 the '276 patents against Applied or any of its customers;

21
22 B. Declaring that Applied's products, including those used in the Endura product line, do not
23 directly or indirectly infringe any claim of the '657 patent and enjoining Demaray, its officers,
24 agents, employees, attorneys, and all persons in active concert or participation with them, from
25 directly or indirectly charging infringement, or instituting further action for infringement, of the to
26 the '657 patent against Applied or any of its customers;

1 C. Declaring that Applied holds a non-exclusive, perpetual, royalty free license to the Asserted
2 Patents and thus, Applied’s reactors cannot infringe the Asserted Patents, and enjoining Demaray,
3 its officers, agents, employees, attorneys, and all persons in active concert or participation with
4 them, from directly or indirectly charging infringement, or instituting further action for
5 infringement, of the to the Asserted Patents against Applied or any of its customers based on
6 Applied’s license;
7

8 D. Declaring that that Applied’s products cannot infringe the Asserted Patents because the
9 rights of named inventor, Mukundan Narasimhan, in the Asserted Patents were assigned to Applied,
10 making Applied at least a co-owner of the Asserted Patents that has not joined and will not join
11 Demaray in alleging infringement of the Asserted Patents;
12

13 E. Finding that this is an exceptional case under 35 U.S.C. § 285;

14 F. Awarding Applied its costs and attorneys’ fees in connection with this action; and

15 G. Such further and additional relief as the Court deems just and proper.

16 **JURY DEMAND**

17 Applied demands a jury trial on all issues and claims so triable.

18 DATED: December 24, 2020

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24 Attorneys for Plaintiff
25 APPLIED MATERIALS
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