

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

DEMARAY LLC,

Plaintiff,

v.

INTEL CORPORATION

Defendant.

Case No. 6:20-CV-00634-ADA

JURY TRIAL DEMANDED

DEMARAY LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD,
SAMSUNG ELECTRONICS AMERICA, INC.,
SAMSUNG SEMICONDUCTOR, INC., and
SAMSUNG AUSTIN SEMICONDUCTOR, LLC

Defendants.

Case No. 6:20-CV-00636-ADA

JURY TRIAL DEMANDED

**DEFENDANTS' CLAIM CONSTRUCTION BRIEF REGARDING ADDITIONAL
TERMS FOR CLAIM 2 OF U.S. PATENT NO. 7,381,657**

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*All emphasis added unless otherwise stated.

For ease of reference, Claim 2 of the '657 patent with the two disputed terms highlighted is reproduced below:

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

providing a process gas between a target and a substrate;
providing pulsed DC power to the target through a narrow band rejection filter such that the voltage on the target alternates between positive and negative voltages;
providing an RF bias that corresponds to the narrow band rejection filter to the substrate; and
providing a magnetic field to the target;

wherein an oxide material is deposited on the substrate, and the insulating film is formed by reactive sputtering in a mode between a metallic mode and a poison mode.

I. INTRODUCTION

Demaray, for nearly a year, continued to represent in three rounds of contentions it would not assert claim 2 of the '657 patent if discovery confirmed Defendants do not use DC power to the target and RF bias to the substrate *to produce an oxide material*. Only after *Markman* (that did not address then un-asserted claim 2), and under the guise of “plain and ordinary meaning”, Demaray now alleges that the “oxide material” in claim 2 can be deposited by *any* process—not the claimed reactive sputtering process—because “the oxide material is one thing, the insulating film is another.” Ex. A at 24:6-7. But the intrinsic record, including the claim’s own language, makes clear that the last limitation—the “wherein” clause including the deposition of the “oxide material”—is the result of the claimed reactive sputtering process, not a disembodied limitation as Demaray advances through a *non*-plain-and-ordinary-meaning interpretation.

II. SUMMARY OF DISPUTE FOR CLAIM 2 OF THE '657 PATENT

There is a single dispute. Defendants contend: the “oxide material” recited in the last “wherein” clause *after* the four claimed method steps (“providing...”), *see supra*, cl. 2, is deposited *as result of those claimed steps*, forming an “insulating film” comprising the “oxide material.” Demaray contends: the “oxide material” may be deposited by *any* process, even if unrelated to the claimed method steps. Only Defendants’ proposal is consistent with the intrinsic evidence. *See Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329 (Fed. Cir. 2005) (stating “a ‘*whereby*’ clause generally states *the result of the patented process*”); *see also Allergan Sales, LLC v. Sandoz, Inc.*, 935 F.3d 1370, 1376 (Fed. Cir. 2019) (treating “wherein” the same as “whereby”).

III. CLAIM TERMS WITH DISPUTED CONSTRUCTIONS

A. “A method of depositing an insulating film on a substrate, comprising:” (’657 patent, cl. 2 preamble)

Plaintiff’s Proposal	Defendants’ Proposal
Preamble is not limiting, except for	Preamble is limiting (“ <i>depositing an</i> insulating

“insulating film on a substrate”	film on a substrate”)
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The parties agree the “insulating film on a substrate” portion is limiting, only disputing whether the full preamble (including “depositing”) is also limiting (as Defendants propose) or whether the requirement that an “insulating film” *be deposited* can be read out of the otherwise limiting preamble (as Demaray proposes). The preamble recites “[a] method of *depositing an insulating film on a substrate*,” and the claim cross-references that deposition when reciting “wherein an oxide material is *deposited on the substrate*”—confirming that the “oxide material” is part of the “insulating film” deposited via the claimed method. Ex. B at cl. 2; *id.* at 4:51-54 (discussing “insulating oxide layers”). By clarifying the relationship between the “oxide material” and the “insulating film,” “*depositing*” in the preamble gives life, meaning, and vitality to the claim. See *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999).

Furthermore, in claim 2, the term “depositing” is directly tied to the phrase “insulating film on a substrate” and thus “the preamble in this case cannot be neatly packaged into two separate portions.” *Bio-Rad Labs., Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1371-72 (Fed. Cir. 2020) (construing entire preamble as limiting where “[t]he language relied upon for antecedent basis in the preamble at issue is intertwined with the rest of the preamble.”).

B. “wherein an oxide material...” (’657 patent, cl. 2)

Plaintiff’s Proposal	Defendants’ Proposal
Plain and ordinary meaning	“wherein an oxide material is deposited on the substrate, and the insulating film comprising the oxide material is formed by reactive sputtering in a mode between a metallic mode and a poison mode”

Demaray’s new theory that the “oxide material” can be deposited pursuant to *any* method is *not* the “plain and ordinary meaning” of the “wherein clause,” and it is contrary to its prior interpretation repeatedly made to Defendants. The plain language of the claim recites “[a] method

of depositing an insulating film” pursuant to the claimed reactive sputtering steps (“providing...”), not a method of depositing an “insulating film” and a separate, disembodied deposition process of an “oxide material.” Defendants’ proposal reflects the plain and ordinary meaning of the “wherein” clause: the “insulating film” is formed from depositing the “oxide material” as part of the claimed reactive sputtering process (as opposed to any undescribed or non-enabled deposition process)—consistent with Demaray’s own (prior) view of the claim. Ex. D (Intel) / Ex. E (Samsung).

First, the claim language itself confirms the “insulating film” comprises the “oxide material.” “Wherein”/“whereby” clauses state the result of the method, and the deposition of the “oxide material” is part of the “wherein” clause. *Hoffer*, 405 F.3d at 1329. Further, the preamble recites “[a] method of depositing an insulating film on a substrate,” and the body of the claim in turn recites that “an oxide material is deposited on the substrate.” Ex. B at cl. 2. The deposition of that “oxide material” is the only deposition on a substrate recited in the body of the claim and must be what forms the “insulating film.” *See id.* at 4:51-54 (describing “insulating oxide layers”). Moreover, claim 2 requires that the insulating film be formed by “reactive sputtering.” *Id.* at cl. 2. Oxide materials can be deposited via physical vapor deposition—as in the patent—only by reactive sputtering. *Id.* at 5:43-45, 9:6-8; Dkt. 46-1 at ¶ 39. Dependent claims provide further support. Ex. B at cls. 3, 8, 9 (each requiring oxygen). For example, claim 9 recites “[t]he method of claim 2, wherein *the Oxygen* flow is adjusted to adjust the index of refraction of *the film*,” where reference to “*the Oxygen* flow” means oxygen is necessarily present in claim 2 for forming the “insulating film” by reactive sputtering (*i.e.*, the target material reacting with oxygen to deposit an “oxide material”). Ex. B at cl. 9; *id.* at 5:43-45, 9:6-8; Dkt. 46-1 at ¶ 39. Claim 2 also requires the “insulating film” be formed by reactive sputtering in a “mode between a metallic mode and a poison mode,” which is defined in the patent in terms of oxide deposition—“[t]he poison mode *is*

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