UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
AND TSMC NORTH AMERICA CORP.
Petitioner

v.

ZOND, LLC
Patent Owner

U.S. Patent No. 7,604,716

Inter Partes Review Case No. 2014-00807

PATENT OWNER's PRELIMINARY RESPONSE
UNDER 37 CFR § 42.107(a)

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I. Introduction

The Petitioner has represented in a motion for joinder that this petition "is identical to the Intel IPR no. IPR2014-00522 in all substantive respects, includes identical exhibits, and relies upon the same export declarant." Accordingly, based upon that representation, the Patent Owner opposes review on the same basis presented in opposition to Intel's request no. IPR-2014-00522, which is reproduced below:

The present petition for *inter partes* review of U.S. Patent No. 7,604,716 ("the '716 patent") is the third of four petitions filed by Intel challenging the '716 patent. This petition challenges two of the patent's four independent claims (nos. 14, 26) and several other claims that depend from claims 14, 26.

The challenges are based on two prior art references, Mozgrin[1] and Wang,[2] that were already considered by the Patent Office, combined with a prior art article by Kudryavtsev.[3] As explained in detail below, the challenged claims require, inter alia, a multi-stage ionization process in which atoms in a weakly ionized gas are first excited from the ground state before being ionized

[1] Ex. 1203, Mozgrin.

[2] Ex. 1204, Wang patent No. 6,413,382 ("Wang").

[3] Ex. 1205, Kudryavtsev.

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to form a strongly ionized plasma, but without developing an electrical breakdown condition. This is in contrast to a conventional ionization process in which atoms are ionized directly from the ground state, without first achieving an excited state.

The Petition tacitly acknowledges that neither primary reference, Mozgrin nor Wang, explicitly discusses or even hints of such an ionization process. So the Petition instead argues that Mozgrin and Wang inherently implement the claimed multi-stage ionization, citing to Kudryavtsev as proof. But as a matter of law, "inherency may not be established by probabilities or possibilities."[4] As the Board observed in a similar case: "it is well settled that the 'very essence of inherency is that one of ordinary skill in the art would recognize that a reference *unavoidably* teaches the property in question."[5] "The mere fact that a certain thing may result from a given set of circumstances is not sufficient."[6]

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[4] *Id*.

[5] *UBE Maxwell Co. v. LG Chem, LTD*, IPR203-00470, Paper 25, page 12, *citing Agilent Technologies, Inc. v. Affymetrics, Inc.*, 567 1366, 1383 (Fed. Cir. 2009).

[6] *In re Oelrich*, 666 F.3d 578, 581 (CCPA 1981).

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