

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FUJITSU SEMICONDUCTOR LIMITED,
FUJITSU SEMICONDUCTOR AMERICA, INC.,
ADVANCED MICRO DEVICES, INC., RENESAS ELECTRONICS
CORPORATION, RENESAS ELECTRONICS AMERICA, INC.,
GLOBALFOUNDRIES U.S., INC., GLOBALFOUNDRIES DRESDEN
MODULE ONE LLC & CO. KG, GLOBALFOUNDRIES DRESDEN
MODULE TWO LLC & CO. KG, TOSHIBA AMERICA ELECTRONIC
COMPONENTS, INC., TOSHIBA AMERICA INC., TOSHIBA
AMERICA INFORMATION SYSTEMS, INC.,
TOSHIBA CORPORATION, and
THE GILLETTE COMPANY,
Petitioner,

v.

ZOND, LLC,
Patent Owner

Patent 7,604,716 B2

IPR Case Nos. IPR2014-00807, 00808, 01099, 01100

**SUPPLEMENTAL DECLARATION OF
UWE KORTSHAGEN PH.D.
ON BEHALF OF PETITIONER**

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I, Uwe Kortshagen, declare as follows:

1. My name is Uwe Kortshagen.

2. My background is detailed in my declarations submitted with the original Petition for *Inter Partes* Review in Case Nos. IPR2014-00807, 00808, 01099, and 01100.

3. I have reviewed the following publications in preparing this declaration:

- U.S. Patent No. 7,604,716 (the “716 Patent” (Ex. 1001, 1101, 1201, 1301))
- D.V. Mozgrin, *et al*, High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research, Plasma Physics Reports, Vol. 21, No. 5, pp. 400-409, 1995 (“Mozgrin” (Ex. 1003, 1103, 1203, 1303)).
- A. A. Kudryavtsev *et al*, Ionization relaxation in a plasma produced by a pulsed inert-gas discharge, Sov. Phys. Tech. Phys. 28(1), pp. 30-35, January 1983 (“Kudryavtsev” (Ex. 1205, 1305)).
- U.S. Pat. No. 6,413,382 (“Wang” (Ex. 1004,1104, 1204, 1304)), including U.S. Pat. No. 6,306,265 (“Fu” (Ex. 1010, 1319)) and U.S. Pat. No. 6,398,929 (“Chiang” (Ex. 2008)) both of which Wang incorporates by reference.
- U.S. Pat. No. 6,190,512 (“Lantsman” (Ex. 1105, 1306)).

4. Also, I have reviewed papers in the *Inter Partes* Review Case Nos. IPR2014-00807, 00808, 01099, and 01100 including the Petitions and my accompanying Declarations. As discussed below, I agree with my conclusions as stated in those Declarations. Further, I have reviewed the Board's Institution Decisions, Patent Owner's Responses, the accompanying Declaration of Larry D. Hartsough, Ph.D. ("Hartsough Decl.," Ex. 2004), and various transcripts from the depositions of Larry D. Hartsough, Ph.D. in a variety of *Inter Partes* review proceedings challenging this and other Zond patents.

5. I have read and understood each of the above material and any other publication cited in this declaration. As I stated previously, the disclosure of each of these publications provides sufficient information for someone to make and use the plasma generation and sputtering processes that are described in the above publications.

6. I have considered certain issues from the perspective of a person of ordinary skill in the art as described below at the time the '716 Patent application was filed. In my opinion, a person of ordinary skill in the art for the '716 Patent would have found the '716 Patent invalid.

7. I have been retained by Petitioner as an expert in the field of plasma technology. I am working as an independent consultant in this matter on behalf of Petitioner and am being compensated at my normal consulting rate of \$450/hour

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