

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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FUJITSU SEMICONDUCTOR LIMITED, FUJITSU SEMICONDUCTOR AMERICA, INC., ADVANCED MICRO DEVICES, INC., RENESAS ELECTRONICS CORPORATION, RENESAS ELECTRONICS AMERICA, INC., GLOBAL FOUNDRIES 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,

Petitioners

v.

ZOND, LLC  
Patent Owner

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*Inter Partes* Review Case No. IPR2014-00800<sup>1</sup>  
Patent 7,811,421

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**PATENT OWNER'S OBSERVATIONS ON CROSS-EXAMINATION  
OF PETITIONER'S REPLY WITNESS**

**37 C.F.R. §42.70**

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<sup>1</sup> Cases IPR2014-00844, IPR2014-00991, and IPR2014-01037 have been joined with the instant proceeding

Pursuant to 37 C.F.R. §42.70(a), Patent Owner, Zond, LLC, hereby submits its observations on cross-examination of Dr. Overzet, whose Declaration was submitted by Petitioners with their Reply Brief filed May 1, 2015. Dr. Overzet's cross-examination was conducted by deposition on May 7, 2015. Exhibit 2018 is a transcript of that deposition, and is used as the basis for the present observations.

1. **Dr. Overzet's testimony confirms that the '421 patent used the phrase "creates a weakly ionized plasma" to refer to the ignition of feed gas.**

In his testimony at page 87, line 4 – page 88, line 19; and at page 99, line 10 – page 104, line 5 (in particular within the excerpts below), Dr. Overzet confirmed that the '421 patent used the phrase "creates a weakly ionized plasma" to refer to the ignition of feed gas. This is relevant to the Patent Owner's assertion that the claimed phrase "creates a weakly ionized plasma" refers to igniting a gas from a state in which there is no plasma to a state in which a plasma exists. (Patent Owner Response, pages 18 – 22) and to the Petitioner's arguments to the contrary (Petitioners' Reply, pages 2 – 4):

**Excerpt A: Zond Ex. 2018, Page 102, line 6 - page 104, line 5**

Q. So look at the entire sentence: "The characteristics of the voltage pulse are chosen such that an electric field develops between the cathode assembly that **creates a weakly-ionized plasma** 362 in the region 245."

...

Q. Do you see that language at column 11 --

A. I do.

Q. -- lines 14 on?

A. I see that language, uh-huh.

Q. Now, which of the two techniques for creating a weakly-ionized plasma do you think is being referred to here?

A. It wasn't part of the section that we read together, but the first line of that paragraph describes the beginning of the feed gas flow. Do you see that in that first line, after the feed gas is supplied between the cathode assembly and the anode --

Q. At line 9, right.

A. Yes, indicating an initiation of the feed gas flow --

Q. Uh-huh.

A. -- yes. So because of that line, I have the impression that this would be a first application of the electric field.

**Q. Does that mean that the sentence referred to here starting at line 14 through 18 or 19 refers to the first type – first technique for creating weakly-ionized plasma that you referred to in your declaration as ignition?**

A. As I read this and think about it, in its context, **it is consistent with the first application** in developing a first weakly-ionized plasma.

Q. By "**first**" you mean **ignition**, just --

A. **Yes.**

**Excerpt B: Zond Ex. 2018, Page 88, lines 3 – 14:**

Q. In the flow chart depicted in figures 11A and 11B, can you identify for me a step that corresponds to the creation of weakly-ionized plasma referenced in element B of Claim 1?

A. It looks to me like item 618 is that location, because it says, "Ionized feed gas to generate weakly-ionized plasma."

- 2. Dr. Overzet's was unable to identify any text of the '421 patent that used the phrase "creates a weakly ionized plasma" to refer to the so-called "alternative technique" in which a strongly ionized plasma transitions to a weakly ionized plasma.**

In his testimony at page 111, line 6 – page 114, line 19, and in particular in the testimony excerpts below, Dr. Overzet testified that he was unable to identify any text of the '421 patent that used the phrase "creates a weakly ionized plasma" when referring to the so-called "alternative technique" in which a strongly ionized plasma transitions to a weakly ionized plasma. This too is relevant to the Patent Owner's interpretation of the claimed phrase "creates a weakly ionized plasma" and rebuts Petitioners' proposed interpretation:

Q. So based upon your review to date and your -- your current knowledge, are you able to cite right now any additional text in the '421 patent where the phrase "creates a weakly-ionized plasma" was used to refer to the technique referred to in paragraph 31 of your declaration?

A. I cannot point to at this moment in time a location in the '421 patent that refers to creating a weakly-ionized plasma as occurring from a strongly-ionized plasma

3. **Dr. Overzet confirmed that the '421 patent instead used the phrase "maintains the plasma" when referring to a transition from a strongly ionized plasma to a weakly ionized plasma.**

In his testimony at page 111, line 18 – page 113, line 10, and in particular in the testimony excerpts below, Dr. Overzet acknowledges that the text of the '421 patent that describes the transition from a strongly ionized plasma to a weakly-ionized plasma uses the phrase "**maintains** the plasma" for this transition, and NOT the claimed phrase - "creates a weakly ionized plasma." This too is relevant to the dispute over the meaning of the claimed phrase "creates a weakly ionized plasma" by demonstrating that the Patent Owner's proposal is consistent with the language of the '421 patent specification and that the Petitioners' proposal is not:

A. So if I may parrot the question back to you, the question is, **am I aware of the '421 patent using the phrase "creates a weakly-ionized plasma" in conjunction with the transition from strongly-ionized to generating weakly-ionized, from a strongly-ionized?**

Q. Yes.

A. I've got the wrong patent in front of me now.

Q. And again, I want to break it down.

First I want to see if you have any in mind, and if not, you know, look to the patent if you'd like and see if you can find it. So let's start with what you know.

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