

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRW AUTOMOTIVE U.S. LLC
Petitioner

v.

MAGNA ELECTRONICS INC.
Patent Owner

Case IPR2015-01429
Patent 8,692,659

**PATENT OWNER MAGNA ELECTRONICS INC.'S PRELIMINARY
RESPONSE TO PETITION PURSUANT TO 37 C.F.R. § 42.107**

Mail Stop "PATENT BOARD"

Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

I.	The Board should not institute <i>inter partes</i> review of the '659 patent.	1
II.	The Board should exercise its discretion and deny institution under § 325(d).	4
III.	The '659 patent has adequate support to satisfy the § 112 written description requirement and properly claims benefit of the '287 patent.	5
A.	The description associated with Figure 16B provides adequate written description of the challenged claims.	6
1.	The description associated with Figure 16B discloses “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield.”	6
2.	The description associated with Figure 16B discloses “at least one attachment member adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.”	7
3.	The description associated with Figure 16B discloses “wherein said structure is configured to accommodate a forward facing camera.”	8
4.	The description associated with Figure 16B discloses a “CMOS imaging device.”	9
B.	The written description requirement under § 112 does not require that a single embodiment fully describe the invention.	10
C.	Additional disclosure in the '287 patent provides adequate written description.	13
1.	The specification discloses “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield.”	13
2.	The specification discloses “at least one attachment member adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.”	13
3.	The specification discloses “wherein said structure is configured to accommodate a forward facing camera.”	15
4.	The specification discloses a “CMOS imaging device.”	16
D.	TRW mischaracterizes the teachings of the '659 patent and the '287 patent to allege deficiencies under § 112.	16

IV.	The Board should not consider Batavia.....	19
A.	Ground 3 provides vertically redundant grounds.....	19
B.	TRW fails to establish Batavia as prior art.	20
V.	TRW and Dr. Kazerooni are inconsistent in their application of the references.	21
A.	TRW’s position regarding Blank’s disclosure is inconsistent when compared to TRW’s position advanced in previous cases.....	21
B.	TRW has changed its position regarding the references with respect to the claimed elements of the ’659 patent.....	25
VI.	TRW fails to establish a reasonable likelihood of success in establishing obviousness of claims 56-61.....	27
A.	Independent claim 56	27
1.	The references fail to disclose the claimed structure.....	27
2.	Under TRW’s construction, the references fail to disclose “at least one attachment member.”	29
3.	According to TRW’s own expert, the proposed combination fails to disclose “wherein, with said structure received by and supported by said at least one attachment member, said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said at least one attachment member.”	30
4.	A POSA would not have combined Blank, Schofield, and Klappenbach.....	31
5.	TRW fails to adequately explain how the proposed combination discloses the at least one attachment member “local to said attachment element.”	35
B.	Claim 57	37
C.	Claim 58	38
D.	Claim 59	39
E.	Claim 60	40
F.	Claim 61	43

VII.	TRW fails to provide a foundation for its proposed grounds of unpatentability	46
A.	TRW fails to fully and properly consider the scope of the claims before applying the asserted references.	46
B.	TRW fails to resolve the level of ordinary skill in the art.....	48
VIII.	TRW’s failure to accurately identify all real parties in interest renders the Petition fatally defective requiring non-institution.	51
A.	TRW Holdings is an unnamed RPI.....	53
B.	ZF is an unnamed RPI.....	56
IX.	Conclusion	60

EXHIBIT LIST

Exhibit No.	Description
2001	Public Redacted Version of Answer to Second Amended Complaint and Jury Demand, <i>Magna Electronics Inc. v. TRW Automotive Holdings Corp., et al.</i> , Case No. 1:14-cv-00341 (W.D. Mich.), filed September 8, 2014. (“Answer”)
2002	Amended Corporate Disclosure Statement Under Fed. R. Civ. P. 7.1, <i>Bridgestone Americas Tire Operations, LLC v. TRW Automotive Holdings, Corp., et al.</i> , Case No. 1:13-cv-1550 (D. Del.), filed August 7, 2015. (“Amended Corp. Disclosure”)
2003	Form 10-K (Annual Report) for TRW Automotive Holdings Corp., filed February 13, 2015 for the Period Ending December 31, 2014, with Amended Annual Report Form 10-K/A, filed April 28, 2015. (“Form 10-K”)
2004	TRW Press Release, “U.S. Federal Trade Commission Clears ZF’s Acquisition of TRW,” dated May 5, 2015. (“May 5 TRW Press Release”)
2005	ZF Press Release, “ZF completes Acquisition of TRW Automotive,” dated May 15, 2015. (“May 15 ZF Press Release”)
2006	TRW’s Website, accessed at http://www.trw.com (“TRW Website”)
2007	“From a Position of Strength: ZF and TRW Unleash the Power of ² ,” accessed at http://www.zf.com/corporate/en_de/magazine/magazin_artikel_vie_wpage_22089384.html?_ga=1 (“ZF Website”)
2008	ZF Locations in the USA, accessed at http://www.zf.com/corporate/en_de/company/locations_worldwide/north_america/united-states_locations/united_states_zfworldwide.jsp (“ZF Locations”)
2009	ZF Board of Management, accessed at http://www.zf.com/corporate/en_de/company/organization/board_of_management/board-of-management.html (“ZF Management”)
2010	ZF TRW Board of Directors, accessed at http://www.trw.com/AboutTRW/leadership/ZF_TRW_Board_of_Directors (“ZF TRW Directors”)

Exhibit No.	Description
2011	ZF Press Release, “New Members to ZF’s Board of Management,” dated December 18, 2014 (“Dec. 18 ZF Press Release”)
2012	ZF Investor Relations, accessed at http://www.zf.com/corporate/en_de/company/organization/investor_relations/investor_relations_index.html?_ga=1.233489116.316708794.1436894979 (“Investor Relations”)
2013	Condensed Interim Consolidated Financial Statements as of June 30, 2015 for ZF Friedrichshafen AG for Period dating January 1 to June 30, 2015. (“Consol. Financial Statements”)
2014	“Highway Driving Assist Totally relaxed at 75 mph,” accessed at http://www.zf.com/corporate/en_de/magazine/magazin_artikel_vue_wpage_22123496.html (“ZF Article”)

I. The Board should not institute *inter partes* review of the '659 patent.

Petitioner TRW Automotive U.S. LLC ("TRW") has filed a total of eleven petitions challenging the patentability of U.S. Patent No. 8,692,659 ("the '659 patent"). The Board denied institution of TRW's first '659 patent petition on all asserted grounds. (IPR2015-00972 Decision Denying Institution, Paper 9, p. 2.) While TRW now challenges different claims of the '659 patent, TRW relies on the same deficient combination that was denied institution in IPR2015-00972. Any additional references asserted here do not overcome the base deficient combination. The Board should therefore also deny institution of this Petition.

TRW challenges claims 56-61 of the '659 patent on at least three different obviousness grounds and six references. First, TRW asserts that claims 56-61 are obvious over U.S. Patent No. 6,445,287 ("the '287 patent," Ex. 1012). Second, TRW challenges claims 56-59 as obvious over Blank, Schofield, and Klappenbach. Third, TRW challenges claims 60-61 as obvious over Blank, Schofield, Klappenbach, and optionally Batavia. Each of these proposed grounds is flawed, even when overlooking insufficiencies in TRW's underlying factual inquiries for its § 103 analysis. Accordingly, the Board should not institute *inter partes* review of any of the challenged claims of the '659 patent.

Although none of the claims challenged in this Petition were challenged in IPR2015-00972, many of the claim elements are the same. And TRW similarly

addresses the challenged claims here despite making some changes to its explanation of the asserted combinations. The asserted art and TRW's argument is therefore substantially the same to the art and argument that has previously been presented to the Office. Accordingly, the Board should exercise its discretion under § 325(d) to deny institution of this Petition.

Even if the Board does not exercise its discretion under § 325(d), the Board should still deny institution. Each of TRW's proposed grounds of unpatentability fails to show a reasonable likelihood of success. Ground 1 fails because the '287 patent is not prior art. The '659 patent is a continuation of the '287 patent. While TRW asserts that the abstract of the '659 patent includes new matter, this is not the case. Putting the abstract aside, every claimed feature is disclosed in the '659 patent. This disclosure shows possession of the claimed invention. Because the '287 patent specification includes the same disclosure as does the '659 patent, the chain of priority is not broken. Thus, the '287 patent also shows possession of the claimed invention. The '659 patent properly claims the benefit of the '287 patent, which means that the '287 patent is not prior art. Thus, Ground 1 fails.

Grounds 2 and 3 are also deficient in showing the challenged claims to be obvious. Ground 3 actually proposes two grounds—one that relies on Batavia and one that does not. The ground that relies on Batavia is vertically redundant to the ground that does not. In addition, TRW has presented no evidence to establish

Batavia as prior art. Thus, the Board should not consider Batavia. In presenting Grounds 2 and 3, TRW takes inconsistent positions. For example, TRW relies on an interpretation of Blank that is inconsistent with TRW's position in earlier cases. The Board should consider these inconsistencies as it determines whether TRW meets its burden.

TRW's explanation for how the references asserted in Grounds 2 and 3 render the challenged claims obvious is deficient, and in any event, wrong. A person of ordinary skill in the art ("POSA") would not have combined Klappenbach with Blank and Schofield. TRW's reasons for combining Klappenbach with Blank are obviated by combining Schofield with the Klappenbach and Blank combination. TRW combines Klappenbach's rain sensor with Blank's display, but then, when combining Schofield with the Klappenbach/Blank combination, TRW replaces Klappenbach's rain sensor with Schofield's imaging sensor module, thus obviating the proposed reason for combining Klappenbach with Blank in the first place. Both Blank and Schofield disclose attaching accessories to the rearview mirror assembly using the same attachment element, rather than at least one separate attachment member. Thus, a POSA would not have combined Klappenbach with Blank and Schofield and this proposed combination does not render the challenged claims obvious.

Even if the various references were combined, the resulting combination

would not disclose each and every element of the challenged claims. And TRW fails to adequately explain how these references render the challenged claims obvious. For at least these reasons, Ground 2 also fails.

The Board should also deny institution because TRW fails to accurately identify all real parties in interest. TRW has made statements that call into question the true identities of the real parties in interest. Moreover, another company recently acquired TRW. Thus, the requirements of 35 U.S.C. § 312(a)(2) have not been met. Because TRW is now barred by statute from supplementing its Petition under 35 U.S.C. § 315(b), it is too late for TRW to cure this defect.

II. The Board should exercise its discretion and deny institution under § 325(d).

In deciding whether to institute *inter partes* review, the Board has discretion to “reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). TRW previously challenged claims of the ’659 patent by presenting the same prior art and substantially the same argument. (*See* IPR2015-00972, Petition, p. 2.) Thus, in the interests of judicial economy, fairness, and consistency, the Board should exercise its discretion and deny the Petition.

In IPR2015-00972, TRW challenged claims 1, 3, and 90-92 as obvious over the ’287 patent and as obvious over the combination of Blank, Schofield, and Klappenbach or the combination of Blank, Schofield, Klappenbach, and Carter.

TRW now presents similar challenges here. Outside of a single additional (optional) reference for two of the challenged claims, the art is identical to the art presented in IPR2015-00972. While TRW presents its case slightly differently in attempting to overcome inconsistencies and misstatements (see Section V), the arguments are also substantially the same. Although TRW challenges different claims here, many of the claim elements are the same and whether the same claims are challenged is not a consideration under § 325(d). *Ford Motor Co. v. Paice LLC & The Abell Found., Inc.*, IPR2015-00767, Paper 14, p. 7 (P.T.A.B. Aug. 18, 2015). Accordingly, the Board should use its discretion under § 325(d) to deny institution of the Petition.

III. The '659 patent has adequate support to satisfy the § 112 written description requirement and properly claims benefit of the '287 patent.

In Ground 1, TRW first challenges claims 56-61 as obvious over the '287 patent based on a written description challenge under § 112. The '659 patent is a continuation of the '287 patent. ('659 patent, Ex. 1002, 1:7-23.) TRW attempts to show that the '287 patent lacks written description support for the claims and, at the same time, discloses each of the claim elements so as to render the claims obvious. While a priority patent may both lack written description support for a claim and render the claim obvious, TRW's attempt fails and the correct priority date for the '659 patent is at least November 10, 2000—the '287 patent's filing date—because the '659 patent is entitled to the benefit of the '287 patent.

In asserting that there is no early priority for the claims of the '659 patent, TRW both mischaracterizes the '287 patent and misapplies the law. The '287 patent, the '659 patent, and the immediate parent of the '659 patent, U.S. Patent No. 8,325,028 ("the '028 patent"), all satisfy the written description requirement of the claims. As TRW points out, "the specifications of all three patents ('287, '028, and '659) are the same." (Petition, Paper 2, p. 15.) Thus, while the discussion below cites to the '287 patent, the other patents contain the same disclosure.

A. The description associated with Figure 16B provides adequate written description of the challenged claims.

TRW specifically challenges the combination of the claimed attachment element and the claimed structure configured for mounting to said at least one attachment member and to accommodate a forward facing camera. (Petition, pp. 11-14.) While TRW alleges that the claimed "combination is nowhere disclosed in the '287 Patent" (*id.* at 12), the '287 patent provides adequate support to show possession of the claimed invention as required by § 112. Further, the embodiment that TRW asserts is deficient discloses this claimed combination.

1. The description associated with Figure 16B discloses "an attachment element adhesively attached at an in-cabin surface of a vehicle windshield."

In describing Figure 16B, the disclosure unequivocally states that "[m]irror mounting button 8536 provides a mount for mirror assembly 8510." ('287 patent, 28:38-39.) This mounting button is exemplary of the claimed attachment element.

Accordingly, the description associated with Figure 16B discloses “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield.”

2. The description associated with Figure 16B discloses “at least one attachment member adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.”

The description of Figure 16B also teaches that “[o]ptionally, the downwardly extending portion of header/header console 8512 may be mounted to the inner surface of windshield W, such as by an adhesive or may be releasably, mechanically attached such as by being received by and/or supported by one or more attaching members adhered to the inner surface of the windshield, such as by attachment members, including rails, channels, or the like.” (’287 patent, 28:22-28.) The inventors thus had possession of at least one separate attachment member, in addition to the attachment element, to support a structure.¹

That the at least one attachment member is local to said attachment element is evidenced by the fact that the downwardly extending portion which they support straddles the mirror mounting button (*id.* at 28:15-22) and FIG. 16B shows this

¹ The Board confirmed that the ’287 patent contains sufficient written description of a plurality of attachment members attached to a vehicle windshield and local to a mirror mounting button. (IPR2015-00972 Decision Denying Institution, pp. 6-7.)

downwardly extending portion local to the attachment element. Thus, the description associated with Figure 16B also discloses “at least one attachment member adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.”

3. The description associated with Figure 16B discloses “wherein said structure is configured to accommodate a forward facing camera.”

As TRW recognizes (*see* Petition, p. 15), the same embodiment discloses that “header console 8512 may support a plurality of vehicle accessories, including for example . . . one or more cameras.” (’287 patent, 28:55-59.) While TRW takes issue with a purported lack of an indication of the camera’s direction, “it is unnecessary to spell out every detail of the invention in the specification.” *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005). Instead, “only enough must be included to convince a person of skill in the art that the inventor possessed the invention and to enable such a person to make and use the invention without undue experimentation.” *Id.*

The description associated with Figure 16B has sufficient disclosure. The disclosure that header console 8512 can support one or more cameras shows possession of a forward facing camera. The Board recognized that “[t]he ’287 patent discloses that the console supported by the attachment members in Figure 16B provides mounting surfaces for various vehicle accessories, including those

described in other[] embodiments in the '287 patent.” (IPR2015-00972 Decision Denying Institution, p. 8 (citing '287 patent, 28:1-7).) “Those other embodiments in the '287 patent indicate that the vehicle accessories mounted on the console may include a forward-facing CMOS camera.” (*Id.* at 8-9 (citing '287 patent, 24:1-3, 37:27-32).) Thus, the description associated with Figure 16B also discloses “wherein said structure is configured to accommodate a forward facing camera.”

4. The description associated with Figure 16B discloses a “CMOS imaging device.”

TRW alleges that the CMOS imaging device of claim 57 is unsupported because “a CMOS camera is never disclosed in an embodiment also having” other claim elements. (Petition, p. 16.) But the description associated with Figure 16B teaches that “header console 8512 includes an extension 8513 which extends down from headliner H along the inner surface of windshield W of the vehicle and extends behind mirror assembly 8510 to provide ample space and mounting surfaces for one or more vehicle accessories, such as described in reference to the previous embodiments and the referenced applications.” ('287 patent, 28:1-7.) Thus, the disclosure teaches that header console 8512 of the Figure 16B embodiment can include the vehicle accessories described in previous embodiments, such as “one or more image capturing devices, such as a CCD

camera or a CMOS camera.” (’287 patent, 24:1-8.)² This adequately discloses a CMOS imaging device in the Figure 16B embodiment.

B. The written description requirement under § 112 does not require that a single embodiment fully describe the invention.

Even if Figure 16B and its associated description by itself does not describe the claimed combination, § 112 is still satisfied. TRW improperly limits the inquiry to a single embodiment (*see, e.g.*, Petition, p. 16, n. 14), but “the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). In addition, this inquiry is very fact specific and “the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Id.* (citing *Capon v. Eshhar*, 418 F.3d 1349, 1357-58 (Fed. Cir. 2005)).

TRW admits that every claimed element is taught in the ’287 patent. (Petition, pp. 20-33.) Any alleged modifications to the Figure 16B embodiment proposed by TRW are according to “express suggestions from the ’287 Patent itself.” (*Id.* at 22.) But TRW takes issue with the specification allegedly lacking an embodiment that contains examples explicitly covering the full scope of the claim

² See IPR2015-00972 Decision Denying Institution, pp. 8-9.

language. (*Id.* at 16 (“Nowhere does the ’287 Patent disclose what is claimed *in combination.*”) (emphasis in original).)

Although TRW cites multiple written description cases, in none of these cases does the court find that the specification discloses all claimed elements but lacks written description support because these claimed elements are not present in a single embodiment. *See Hollmer v. Harari*, 681 F.3d 1351 (Fed. Cir. 2012) (finding a lack of written description because the parent applications did not unambiguously incorporate by reference); *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565 (Fed. Cir. 1997) (finding a lack of written description because some of the parent applications were missing claim limitations); *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555 (Fed. Cir. 1991) (finding a design patent provided § 112 written description support for a continuation application); *Martin v. Mayer*, 823 F.2d 500 (Fed. Cir. 1987) (finding a lack of written description because the specification did not teach a plurality of cables); *In re Lukach*, 442 F.2d 967 (C.C.P.A. 1971) (finding a lack of written description because the claimed range of ratios was not disclosed); *Jepson v. Coleman*, 314 F.2d 533 (C.C.P.A. 1963) (finding a lack of written description where other aspects of the disclosure did not support the actual claim limitations).

Other cases suggest that written description support can be found from multiple embodiments. For example, in *Union Oil*, the Federal Circuit upheld the

jury's verdict that there was sufficient written description under § 112. *Union Oil Co. of Cal. v. Atlantic Richfield Co.*, 208 F.3d 989, 1002 (Fed. Cir. 2000). The jury verdict was upheld even though, as the dissent pointed out, "[i]t is in fact undisputed that the specification discloses no distinct embodiments corresponding to any claim at issue." *Id.* at 1002 (Lourie, J., dissenting). The dissent further stated that "[t]here surely is a description of most of the particular claim limitations of the various claims, but that is not the same as a description of a specific composition described by a particular selection of those characteristics." *Id.* at 1003. Similar to TRW's contentions, the dissent noted that "[a]lthough the specification separately describes most of the individual characteristics of the combinations, it is undisputed that none of the claims at issue is matched in the specification by the combination of characteristics required by that claim." *Id.*

In short, "[a] claim will not be invalidated on section 112 grounds simply because the embodiments of the specification do not contain examples explicitly covering the full scope of the claim language." *LizardTech*, 424 F.3d at 1345. *Lockwood* states that "all the limitations must appear in the specification." *Lockwood*, 107 F.3d at 1572. It does not state that all limitations must appear in a single described embodiment. In contrast, TRW and Dr. Kazerooni base their analyses on whether each element is taught in the Figure 16B embodiment, and not the test of whether the disclosure shows possession from the viewpoint of a POSA.

C. Additional disclosure in the '287 patent provides adequate written description.

Viewing the entire disclosure, as taught in *Ariad*, there is further written description support for the claimed invention that demonstrates that the inventors had possession of the claimed invention. The claimed invention here does not rely on “modifications that the inventor might have envisioned, but failed to disclose.” *Lockwood*, 107 F.3d at 1572. Instead, the '287 patent discloses all features that TRW calls “modifications.” Because the inventors disclosed these claim features in the '287 patent, there is no need to speculate whether the inventors envisioned these so-called modifications. Thus, the reasoning of *Lockwood* does not apply and the '287 patent shows possession of the claimed invention.

1. The specification discloses “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield.”

In addition to the description of Figure 16B, the '287 patent further discloses an attachment element in embodiments associated with Figure 9 (reference numeral 8320), Figures 11-13 (reference numeral 7920), Figure 15 (reference numeral 8120), Figure 16 (reference numeral 8220), Figure 23 (reference numeral 6720), Figure 24 (reference numeral 6820), and Figure 24A (reference numeral 6820'). Accordingly, the specification discloses “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield.”

2. The specification discloses “at least one attachment member

adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.”

Multiple embodiments disclose separate attachment elements for mounting the rearview mirror assembly and the accessory module. For example, the '287 patent teaches that “optionally, accessory module 7912 (*as with other accessory modules of the present invention*) can attach to the windshield (or header region) at an attachment element different than that of the interior mirror assembly.” ('287 patent, 22:40-44 (emphasis added).) This written description establishes that the inventors had possession of using separate attachment elements for the accessory module. In addition, it expressly applies this language to other accessory modules of the present invention, without limiting it to certain embodiments.

Beyond this general description of separate attachment elements, the '287 patent teaches separate attachment elements in embodiments associated with Figures 12-13 (*id.* at 19:20-25), Figure 16 (*id.* at 24:42-52), Figure 23 (*id.* at 34:28-33), Figure 24 (*id.* at 38:9-14), and Figure 24A (*id.* at 39:33-37). (*See also id.* at 39:64-40:3.) In describing these separate elements, the '287 patent teaches that they are adjacent to the mirror mounting button. (*Id.* at 19:20-25.) These disclosures, along with the attachment members described with respect to Figure 16B (*id.* at 28:22-28), adequately provide written description for the separate at least one attachment member being local to the attachment element.

Thus, when viewing the '287 patent as a whole, the written description

requirement under § 112 is satisfied. Accordingly, the specification discloses “at least one attachment member adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.”

3. The specification discloses “wherein said structure is configured to accommodate a forward facing camera.”

Multiple embodiments also disclose “wherein said structure is configured to accommodate a forward facing camera.” For example, the ’287 patent teaches that “header console 8512 includes an extension 8513 which extends down from headliner H along the inner surface of windshield W of the vehicle and extends behind mirror assembly 8510 to provide ample space and mounting surfaces for one or more vehicle accessories, *such as described in reference to the previous embodiments* and the referenced copending applications.” (*Id.* at 28:1-7 (emphasis added).) Previous embodiments explain that “accessory module 8112 may incorporate . . . a rain sensor/fog sensor/fogging sensor.” (*Id.* at 24:1-8.)

Moreover, as TRW and Dr. Kazerooni explain, “[i]t is self-evident that the camera should face in the direction needed for a particular purpose.” (Petition, p. 25; *see also* Kazerooni Decl., Ex. 1513 ¶ 51.) Not only would a POSA have recognized that rain sensors are forward facing under TRW’s reasoning, but the disclosure also provides an embodiment of a rain sensor or fog sensor that is a forward facing camera: “A forward facing camera 6821 is also provided at or within accessory module 6812 with a field of view through the front windshield

(for automatic headlamp control and/or collision avoidance and/or windshield fogging detection and/or rain sensing and/or smart headlamp control).” (’287 patent, 37:27-32.)

Thus, when viewing the ’287 patent as a whole, the written description requirement under § 112 is satisfied. Accordingly, the specification discloses “wherein said structure is configured to accommodate a forward facing camera.”

4. The specification discloses a “CMOS imaging device.”

TRW itself states that “[t]he ’287 patent does disclose CMOS cameras.” (Petition, p. 16.) Thus, this point is not in dispute. Specifically, the ’287 patent discloses “one or more image capturing devices, such as a CCD camera or a CMOS camera.” (’287 patent, 24:1-8.) Because the ’287 patent discloses CMOS cameras, the written description requirement under § 112 is satisfied.

D. TRW mischaracterizes the teachings of the ’659 patent and the ’287 patent to allege deficiencies under § 112.

While TRW errs by ignoring relevant disclosures of the ’287 patent and solely focusing on a single embodiment, this is not TRW’s only flaw. In addition, TRW mischaracterizes the teachings of the ’287 patent to allege deficiencies under § 112 and create confusion.

TRW states that “console 8512 attaches to the mirror button 8536 to support mirror assembly 8510” (Petition, p. 13 (citing ’287 patent, 28:37-40)), but this is not what the specification teaches in the cited portion or elsewhere. Instead, the

cited portion of the '287 patent teaches that “[m]irror mounting button 8536 *provides a mount for mirror assembly 8510*, which detachably attaches to mounting button 8536 by a channel shaped mirror mount 8540.” ('287 patent, 28:38-40 (emphasis added).) This quote does not even mention console 8512, let alone say that console 8512 attaches to or mounts on mirror mounting button 8536.

The relationship between the console 8512 and the mirror mounting button 8536 is that the console 8512 includes a forked portion that straddles mirror mounting button 8536. (*Id.* at 28:15-22.) But this simply discloses a portion of the console 8512 located on each side of the mirror mounting button 8536, rather than the console 8512 attaching to the mirror mounting button 8536. Thus, TRW’s accusation of a lack of teaching “how the ‘rails, channels or the like’ would adhere to the windshield to permit co-engagement as the inverted U or V-shaped portion 8513a engages the mirror mounting button 8536” (Petition, p. 13) is meaningless and irrelevant because the patents do not claim co-engagement, or any engagement, of the inverted U or V-shaped portion with the mirror mounting button.

TRW further mischaracterizes the '287 patent by misreading the claim language of independent claim 56 in the '659 patent. While the claim recites “said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said

attachment element without demounting said structure from said at least one attachment member,” TRW appears to focus on the console 8512 being prevented from moving up to disengage from the attachment members. But the claim makes clear that the structure is not demounted when the mirror assembly is mounted and demounted.

For example, TRW states that “[u]pward movement of the console 8512 in this context would be blocked by the roof of the car proximate the header H, making what is described an impossibility.” (*Id.* at 13.) But no movement of the console is required by the claims. To the contrary, the claims require that with the structure received by and supported by the at least one attachment member, the mirror mount can be mounted and demounted from the mounting button *without demounting the structure*.

And Dr. Kazerooni himself finds support for this claim feature. He opines that “interference from the roof *would require first demounting the mirror assembly 8530* from mirror button 8536 before demounting console 8512 as claimed.” (Kazerooni Decl. ¶ 40 (emphasis added).) He further states that “it is not . . . clearly described how to demount the console 8512 from the rails or other such structure *unless the mirror assembly 8510 is first removed* from the mirror button 8536.” (*Id.* at 41 (emphasis added).) Furthermore, after arguing that the ’287 patent does not disclose this claim feature, TRW also asserts that the ’287 patent, and

specifically the description associated with Figure 16B, does in fact teach this feature. (*Compare* Petition, pp. 13-14 *with* Petition, p. 28.)

Claim 56 recites that the mirror mount can be demounted from the mirror mounting button without demounting the structure from the at least one attachment member. The '287 patent discloses that the mirror assembly “detachably attaches” to the mirror mounting button, thereby providing support for the above limitation in claim.³

Thus, the '287 patent provides written description support for the challenged claims, the claims are entitled to priority of the '287 patent's filing date, and the '287 patent is not prior art. TRW cannot establish a reasonable likelihood of proving obviousness of any of claims 56-61 on Ground 1 and Ground 1 fails.

IV. The Board should not consider Batavia.

Ground 3 relies optionally on Batavia. The Board, however, should not consider Batavia because the optional addition of Batavia creates vertically redundant grounds and TRW fails to establish Batavia as prior art.

A. Ground 3 provides vertically redundant grounds.

TRW proposes redundant grounds of unpatentability in the Petition. (Petition, pp. 2-3.) Specifically, in Ground 3, TRW relies optionally on Batavia. (*Id.*) Thus, TRW actually proposes four grounds with Ground 3 including one

³ See IPR2015-00972 Decision Denying Institution , p. 8.

ground without Batavia and one ground with Batavia. The analysis that includes Batavia is vertically redundant with the analysis that does not include Batavia.

To move forward on multiple grounds, a “Petitioner must articulate a reasonable basis to believe that from a certain perspective the base ground is stronger, and that from another perspective the ground with additional reference is stronger.” *Liberty Mutual Ins. Co. v. Progressive Casualty Ins. Co.*, CBM2012-00003, Paper 7, p. 12 (P.T.A.B. Oct. 25, 2012). TRW presents the redundant grounds of including Batavia without explaining the relative strength and weakness of each ground. The Petition is therefore “contrary to the regulatory and statutory mandates.” *Id.* at 2. The Board should therefore decline to consider Batavia, which TRW labels as optional.

B. TRW fails to establish Batavia as prior art.

In addition, TRW fails to establish Batavia as prior art because TRW presents no evidence that Batavia was publicly accessible. While TRW seems to assert that Batavia was published on September 20, 1999 (*see* Petition, p. 3, n. 7), neither the Petition nor the Kazerooni Declaration provides any evidence to support this. Moreover, while Batavia itself includes this date on its cover page, this is insufficient to establish that it was publicly accessible as of the date. *Apple Inc. v. DSS Tech. Mgmt, Inc.*, IPR2015-00369, Paper 9, pp. 11-12 (P.T.A.B. Jun. 25, 2015). Batavia merely states on its face that it is “submitted in partial

fulfilment of the requirements for the degree of Doctor of Philosophy.” (Batavia, Ex. 1016, p. 1016-001.) There is no evidence or indication in Batavia, nor is any evidence presented by TRW, that Batavia was publicly available prior to November 10, 2000, as required under 35 U.S.C. §102 to be applied as prior art to the ’659 patent. Because TRW has not established Batavia as prior art, TRW fails to meet its burden and the Board should not consider Batavia.

V. TRW and Dr. Kazerooni are inconsistent in their application of the references.

A. TRW’s position regarding Blank’s disclosure is inconsistent when compared to TRW’s position advanced in previous cases.

In TRW’s first petition challenging the ’659 patent, TRW suggested that a POSA would have combined Klappenbach with Blank to provide functionality for Blank’s display. (IPR2015-00972 Petition, Paper 2, p. 44.) Specifically, TRW stated that the “electronics within Blank’s housing 110 provided displays for a variety of accessories. . . . These were just the displays, not the components themselves.” (*Id.* at 43.) According to TRW, “[t]his established an expectation from the perspective of ordinary skill that the display was used to present information associated with the component, *which must have been separately mounted if not included in Blank’s housing.*” (*Id.* at 43-44 (emphasis added).) TRW asserted that Klappenbach provides this separately mounted component. (*Id.* at 44.)

But TRW's and Dr. Kazerooni's interpretation of Blank contradicted their interpretation of U.S. Patent No. 5,708,410 ("Blank '410"), which is a continuation of Blank⁴, in IPR2014-01351 and IPR2014-01355. For example, in a previous case, Dr. Kazerooni stated that "Blank ['410] teaches that the electronics module thereof should contain a camera for use in a supplemental vision system." (IPR2014-01351 Kazerooni Decl., Ex. 1012 ¶ 36.) He further asserted that a POSA would have placed a camera and other sensors within Blank '410's module instead of using the placement of sensors as disclosed in another reference being combined with Blank '410: "Therefore, one of skill would include the cluster of sensors taught by Schofield in Blank ['410]'s module 26, instead of above and below the adaptor body as taught by Schofield." (*Id.* at 43.) In that case, TRW stated that the only difference between Blank '410 and what was claimed was that Blank '410 "does not detail the specifics of camera in its module 26." (IPR2014-01351 Petition, Paper 1, p. 22.) TRW and Dr. Kazerooni took similar stances in IPR2014-01355. (See IPR2014-01355 Petition, Paper 1, pp. 14, 18; IPR2014-01355, Kazerooni Decl., Ex. 1011 ¶ 35.)

While a reference may suggest opposite courses of action, Blank does not provide any such dual suggestion, thus making TRW's positions inconsistent. How

⁴ Blank '410 has an identical disclosure to Blank ('687) presented in the present petition.

can there be an “established expectation that the display of Blank requires a complementary system” (IPR2015-00972 Petition, p. 44) if “Blank [’410] *strongly suggests* such accessory [accommodated by structure identified as module 26] can be a camera” (IPR2014-01355 Petition, p. 17 (emphasis in original)), and if Blank ’410’s “housing [is] taught as incorporating a camera” (*id.* at 14)? How can “Blank’s recitation of a *display* for a supplemental vision system and/or hazard warning system establish[] an expectation that, in order to make the display functional, the automobile should also be provided with a separately mounted camera for the supplemental vision system” (IPR2015-00972 Kazerooni Decl., Ex. 1013 ¶ 61 (internal citation omitted)), if “Blank [’410] teaches that the electronics module thereof should contain a camera for use in a supplemental vision system” (IPR2014-01351 Kazerooni Decl. ¶ 36)?

TRW’s positions are irreconcilable. At one point in a previous case, TRW stated that “Blank [’410] suggests that these components may be mounted separately or integrally.” (IPR2014-01351 Petition, p. 19.) But the portion of Blank ’410 that TRW cited does not support this proposition. Blank ’410 states: “FIGS. 4B and 10 depict an integrated compass module which houses the electronic circuit of the compass and also the display 154 or 254. A stand-alone compass module may be mounted similarly and supply directional information to other vehicle systems for display or navigational purposes.” (IPR2014-01351 Blank ’410, Ex.

1005, 7:46-51.) These teachings of Blank '410 do not relate to whether the compass is mounted separately or integrally but whether the compass module additionally houses the electronic circuit of the display.

Even TRW recognized the inconsistency and accordingly added in caveats to its statements. For example, TRW now asserts that “Blank discussed the *displays*, not the components generating the data displayed, although Blank could be modified to include such components within its housing.” (Petition, p. 36 (emphasis in original).) TRW further states that “[o]ne of ordinary skill would have included this complementary system either within Blank’s housing, or as a separate module.” (Petition, p. 37.) In addition, TRW has sought to terminate IPR2015-00972 and replace it with a more recent petition that includes these caveats. (IPR2015-01450 Petition, Paper 2, p. 3; *see also* IPR2015-01451 Petition, Paper 2, p. 3.)

Despite TRW’s efforts to correct its inconsistencies, some inconsistencies remain. For example, in a related case, TRW alleges that “it would have been apparent from the perspective of one of ordinary skill that the display of Blank *would require separate mounting of corresponding components or systems to provide data for the display.*” (IPR2015-01426 Petition, Paper 2, pp. 53-54 (emphasis added).)

Beyond the inconsistencies, TRW also fails to sufficiently explain why a

POSA would have used the separately mounted rain sensor of Klappenbach instead of placing a complementary system within Blank's module. In fact, TRW provides evidence that one of skill in the art would have placed the complementary system within Blank's module: "A person of ordinary skill in the art at the time of purported invention would have found it obvious to modify Blank's attachment member 112 to provide a unitary structure with that of Klappenbach's housing 2. This would have been done to reduce the visible footprint of the device in the Eyellipse." (Kazerooni Decl. ¶ 64.) And in a related case, Dr. Kazerooni states that "[f]rom a perspective of ordinary skill it would have been obvious to co-house these additional systems in the housing 2 of Klappenbach to reduce the footprint that would otherwise exist when mounting multiple systems in the vehicle, especially on the windshield." (IPR2015-01433 Kazerooni Decl., Ex. 1813 ¶ 78.) Although this statement is made in the context of a different claim element, Dr. Kazerooni's reasoning also applies to TRW's required complementary system.

As a whole, TRW's positions are inconsistent and the Board should consider these inconsistent positions in all relevant cases. These inconsistent positions also directly undermine Dr. Kazerooni's credibility, and his Declaration should accordingly be given little to no weight.

B. TRW has changed its position regarding the references with respect to the claimed elements of the '659 patent.

As noted above, TRW originally challenged claims 1, 3, and 90-92 of the

'659 patent in IPR2015-00972, but has more recently re-challenged these claims in IPR2015-01450 and IPR2015-01451 and requested that the Board terminate the original Petition. (IPR2015-01450 Petition, p. 3; *see also* IPR2015-01451 Petition, p. 3.) In determining the present Petition, the Board should consider TRW's various explanations of the references with respect to the '659 patent in these related petitions. Although different claims are at issue here, many of the claim elements are the same.

In the more recent case, TRW states that it "would prefer to have review instituted on these claims as presented presently in this Petition." (IPR2015-01450 Petition, p. 3.) But the grounds against these claims are the same in each Petition. (*Compare* IPR2015-00972 Petition, p. 2 *with* IPR2015-01450 Petition, pp. 2-3.) Thus, the only difference could be TRW's explanation of how the references render the challenged claims obvious. TRW thus changes its position regarding the references with respect to the '659 patent.

One example of TRW's change in position has already been explained with respect to Blank. (*See* Section V.A.) One additional example relates to the '287 patent. While TRW originally asserted that the "rails, channels or the like would necessarily also have been placed proximate the mirror assembly" (IPR2015-00972 Petition, p. 25), TRW no longer maintains this assertion, even when challenging the same claim (IPR2015-01450 Petition, pp. 22-24; *see also* Petition, pp. 21-23).

In determining whether TRW has met its burden, the Board should consider TRW's various explanations of the references.

VI. TRW fails to establish a reasonable likelihood of success in establishing obviousness of claims 56-61.

TRW's proposed Ground 1 fails with respect to claims 56-61 for the reasons discussed above in Section III. Grounds 2 and 3 fail at least for the reasons discussed below. Specifically the proposed grounds of obviousness fail to disclose all the claim elements. In addition, a POSA would not have combined the teachings of the various references as asserted by TRW. Finally, TRW's explanation of how the references render the claims unpatentable is deficient in many instances.

A. Independent claim 56

Independent claim 56 is challenged under Ground 2 as obvious over the combination of Blank, Schofield, and Klappenbach. For the reasons that follow, claim 56 is patentable over the proposed combination.

1. The references fail to disclose the claimed structure.

The claimed structure of claim 56 is configured "for mounting to said at least one attachment member," "to receive and be supported by said at least one attachment member," and "to accommodate a forward facing camera." The claim's use of "said structure" indicates that a single structure is configured to meet these features. But the asserted references, both individually and in combination, do not

disclose this claimed structure.

TRW relies on Klappenbach's housing 2 as disclosing the claimed structure and asserts that, when combined with Schofield's imaging sensor module 14, "Klappenbach's housing would function as taught in Klappenbach—i.e. to hold a rain sensor, for instance Schofield's camera rain sensor." (Petition, p. 44.) But TRW takes a very general view of Klappenbach's housing's function when in fact Klappenbach's housing's function is very specifically directed to holding *refractive* rain sensors. Klappenbach's outer housing part 2 and inner housing part 3 are specifically built for a refractive rain sensor (*see, e.g.*, Klappenbach, Ex. 1010, 1:8-14), and thus are not configured to accommodate a forward facing camera, even if it has rain-sensing capabilities (*see id.* at FIG. 1). Nor would a POSA have been motivated to modify Klappenbach's structure to accommodate Schofield's rain sensor. Also, Schofield's housing 28, while containing imaging sensor module 14, is not configured to receive and be supported by said at least one attachment member that is separate from an attachment element that supports a rearview mirror. Neither reference individually discloses the claimed structure.

The references in combination are likewise deficient. Because of the different locations of the housings in Schofield and Klappenbach (spaced from the windshield vs. pressed against the windshield), the references in combination similarly do not disclose a structure that is configured to accommodate a forward

facing camera and to receive and be supported by said at least one attachment member. More specifically, Klappenbach is pressed against the windshield because it is designed for a refractive rain sensor and Schofield is spaced from the windshield because it is designed for a non-contacting imaging sensor module. Thus, the proposed combination fails to render claim 56 obvious.

2. Under TRW’s construction, the references fail to disclose “at least one attachment member.”

Claim 56 further recites, in part, “at least one attachment member adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element.” TRW construes attachment member to be “(1) a separate mount that is distinct from the attachment element *and* (2) adhesively attached to the windshield *for support of a ‘structure’ that is built to accommodate a forward facing camera.*” (Petition, p. 7 (first emphasis in original, second emphasis added).)

In addressing this claim feature, TRW relies on Klappenbach’s fastening devices 4 as disclosing the claimed at least one attachment member. (*Id.* at 36.) But Klappenbach’s fastening devices 4 are not adhesively attached to the windshield for support of a structure that is built to accommodate a forward facing camera. Instead, Klappenbach’s structure is built to accommodate a refractive rain sensor. (Klappenbach, 1:8-14.) Figure 1 of Klappenbach makes it clear that its structure is specifically designed for a refractive rain sensor and is not built to accommodate a forward facing camera. Thus, even under TRW’s own construction, the proposed

combination fails to disclose every element of claim 56.

3. **According to TRW’s own expert, the proposed combination fails to disclose “wherein, with said structure received by and supported by said at least one attachment member, said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said at least one attachment member.”**

Independent claim 56 recites, in part, “wherein, with said structure received by and supported by said at least one attachment member, said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said at least one attachment member.” TRW asserts that the references disclose this feature because Klappenbach’s housing and Blank’s mirror assembly reside on separate mounts. (See Petition, pp. 46-47.)

But TRW fails to cite to a particularly relevant portion of Dr. Kazerooni’s Declaration that suggests that the combination of these references would not result in the claimed invention and would specifically fail to disclose this claim feature. Dr. Kazerooni states that a “person of ordinary skill in the art at the time of purported invention would have found it obvious to modify Blank’s attachment member 112 to provide a unitary structure with that of Klappenbach’s housing 2. This would have been done to reduce the visible footprint of the device in the Eyellipse.” (Kazerooni Decl. ¶ 64.)

With Klappenbach's housing 2 as part of a unitary structure with Blank's attachment member 112, the mirror mount (coupler body 80) could not be mounted to and demounted from said mirror mounting button without demounting said structure from said at least one attachment member because Blank's attachment member 112 covers the mirror mount (coupler body 80). (See Blank, Ex. 1006, FIG. 3B.) Thus, according to TRW's own expert, this feature is not taught by the combination.

4. A POSA would not have combined Blank, Schofield, and Klappenbach.

TRW suggests that a POSA would have combined Klappenbach with Blank to provide data for Blank's display. (Petition, p. 37.) Specifically, TRW asserts that Klappenbach's system is "a component that could have been separately mounted according to the established expectation that the display of Blank requires a complementary system to provide data for use on the display." (*Id.*) TRW's reasoning for combining Klappenbach with Blank is "to use data indicating sensed rain to provide a warning signal to the display of Blank." (*Id.*) But TRW later removes Klappenbach's rain sensor functionality by replacing Klappenbach's rain sensor with Schofield's imaging sensor module. (*Id.* at 44.) Moreover, a POSA would not have sought to have a sensed rain warning signal (from a rain sensor sensing rain at the windshield of the vehicle) provided to the display of Blank for displaying a rain warning to a driver, since any rain at the windshield (and sensed

by the rain sensor) would be viewable to the driver viewing through the rained-on windshield, and no rain warning display would be required or desired. A POSA, viewing Klappenbach and Blank, would not have been led or motivated to provide such a rain warning display at the windshield of the vehicle. Thus, providing rain sensor data is not a valid rationale to combine Klappenbach with Blank because the total combination does not rely on Klappenbach's rain sensor data.

TRW's additional reasons are similarly lacking. For example, TRW's "manufacturing advantage where '[t]he sensor is then not mounted until the motor vehicle is built'" (*id.* at 38 (quoting Klappenbach, 2:13-16)) is also related to Klappenbach's refractive rain sensor. The only remaining rationale to combine Klappenbach with Blank is Klappenbach's encompassing seal. (Petition, p. 38.) When Schofield is brought into the combination, this also becomes meaningless.

TRW asserts that "the seal of Klappenbach would have continued to protect the camera lens from external contamination in the event of this substitution, and that the manufacturing advantage to preinstall the feet 41 would have been retained." (Petition, pp. 44-45.) But Schofield obviates the need for Klappenbach. If TRW would have combined Schofield with Blank first, there would have been no need to include Klappenbach in the combination and a POSA would not have turned to Klappenbach.

The entire teachings of Klappenbach are directed to optically coupling a rain

sensor to the windshield without gluing it directly. (See Klappenbach, 5:19-33.) Optical coupling is required for Klappenbach's refractive system to work properly. (*Id.* at 1:28-40.) While prior art systems used glue to optically couple the sensor to the windshield, this was undesirable because "[i]t proves to be especially difficult in practice to glue such a layer of relatively great size onto the surface of the pane without trapping air bubbles." (*Id.* at 1:31-34.) These air bubbles changed the diffraction conditions of the beam path, thus negatively affecting the function and operation of the sensor. (*Id.* at 1:34-40.) Klappenbach provides a solution to this problem by gluing only the fastening devices to the windshield. (*Id.* at 1:45-2:16.)

But, as Dr. Kazerooni states, "use of the Schofield camera in place of the refractive system of Klappenbach advantageously eliminates the requirement for optical coupling." (Kazerooni Decl. ¶ 59.) In other words, use of Schofield's camera obviates the need for optically coupling a rain sensor without gluing as taught in Klappenbach. The separate mounting accomplished by the "special structure affords a major advantage, which is that it is unnecessary to glue optical components to the pane." (Klappenbach, 5:24-26.) The manufacturing advantage in Klappenbach is not just to preinstall feet, but to preinstall feet so that there is no need to glue optical components to the pane. But Schofield's optical components do not need to be glued to the pane. Thus, a POSA would not be led to combine Schofield's camera with Klappenbach's optically coupled rain sensor, since such a

combination obviates the purpose of Klappenbach's invention.

Finally, Klappenbach's encompassing seal "serves to seal off the interior of the sensor 1 from the outside and thus to keep dirt and water away from the interior." (*Id.* at 4:54-58.) But Schofield's housing protects the interior of imaging sensing module 14 and Schofield expressly states that "the location within the interior of the vehicle substantially eliminates environmental dirt and moisture from fouling the light sensor module." (Schofield, Ex. 1007, 3:67-4:4.) Thus, this rationale for combining Schofield with Klappenbach is also deficient.

TRW argues that the fastening device in Klappenbach can be preinstalled, but does not explain "why that would have made it obvious to use the fastening device in Klappenbach rather than the bracket already disclosed in Schofield." (IPR2015-00972 Decision Denying Institution, p. 11.) Moreover, because the camera in Schofield already is mounted at the windshield using a bracket and does not require the direct optical coupling provided by the fastening device in Klappenbach, a POSA would not have combined the cited teachings of Klappenbach and Schofield as proposed by TRW. (*See id.* at 12.)

In short, all of TRW's purported reasons that a POSA would have combined Klappenbach with Blank and Schofield are unpersuasive because, in the context of Blank and Schofield, Klappenbach's advantages are either not needed or already fulfilled. TRW is combining wholly unrelated aspects of the disclosures to attempt

to arrive at the claimed invention using hindsight reconstruction.

In fact, a POSA would not have combined Klappenbach with Blank and Schofield. A POSA viewing Schofield and Klappenbach would not mount the camera of Schofield in Klappenbach's housing, but would instead mount the camera as taught in Schofield itself. Both Blank and Schofield teach the use of the same structure to mount both the rearview mirror assembly and an accessory module, rather than at least one separate attachment member for an accessory module. (See Blank, FIG. 3B; Schofield, FIG. 1.) Thus, a POSA would not have combined Klappenbach with Blank and Schofield. Accordingly, the proposed combination is only made using impermissible hindsight reconstruction and fails to render claim 56 obvious.

5. TRW fails to adequately explain how the proposed combination discloses the at least one attachment member “local to said attachment element.”

Claim 56 recites, in part, that the at least one attachment member is “local to said attachment element.” TRW relies on Klappenbach as disclosing the claimed at least one attachment member. (Petition, p. 36.) Klappenbach does not provide any teachings regarding the specific location of its device, other than the inside pane of “the windshield of a motor vehicle.” (Klappenbach, 1:8-14.) Thus, TRW asserts that Blank suggests “mounting of the Klappenbach housing ‘local to’ the Blank rear view mirror assembly.” (Petition, pp. 38-39.) TRW bases this assertion on the

Eyellipse analysis noted in Blank. (*Id.*) But TRW's explanation highlights its misunderstanding of the Eyellipse. Moreover, the Eyellipse analysis does not suggest placing Klappenbach's rain sensor local to the attachment element.

An Eyellipse is an area defined by tangent lines, wherein a certain percentage of drivers' eyes (e.g., 95%) are located on the Eyellipse side of the tangent line. (Eyellipse, Ex. 1015, p. 5.) This information regarding eye position for most drivers is used "to determine forward vision angles in automobiles" so as to accomplish safe vehicle and traffic design. (*Id.* at 23-30.) TRW's explanation that the "Eyellipse 48 narrowed away from the eye towards the high center of the windshield, as presented in Fig. 2 of Blank, shown above and to the right" is inaccurate. (Petition, p. 39.) Instead, the tangent lines depicted in Figure 2 illustrate possible angles for the driver's redirection of line of sight from the road to the display. TRW's statements that Blank teaches "to place windshield attachments in the 'Eyellipse'" are also inaccurate. (*Id.* at 55.)

Dr. Kazerooni oversimplifies the Eyellipse model by stating that the "methodology was to draw tangent cut-off ellipses based upon driver eye locations to identify locations blocking the driver's field of view" and that it "is just a way of quantifying the commonsense principle that one should not stick objects on the windshield in a position where they will block the view of the driver in any material way." (Kazerooni Decl. ¶ 55.)

Dr. Kazerooni omits a main point of the Eyellipse, which is to use eye position to determine proper locations of items the driver needs to see for safe driving, such as the location of traffic lights, rearview mirrors, and vehicle displays, without substantial redirection of a driver's line of sight from the road. (Eyellipse, pp. 26-30.) Thus, the Eyellipse was relevant in Blank because Blank is directed to a display. (Blank, 1:13-16.) Blank's teachings provided a display that "minimize[d] refocusing while simultaneously not obstructing the operator's field of vision." (*Id.* at 2:17-20.)

In contrast to Blank's display, a driver has no need to view the rain sensor of Klappenbach while driving. Thus, the only concern is not blocking the driver's view of the road. The Eyellipse analysis does not lead to placing such a rain sensor only in the high center portion of the windshield local to the mirror mounting button, as alleged by TRW, because there are many other suitable locations for such a rain sensor. Thus, TRW's reliance on Blank and the Eyellipse analysis to fill in the missing teaching of placing the at least one attachment member local to the attachment element is misplaced. The proposed combination fails to disclose at least this feature of claim 56.

B. Claim 57

Claim 57 depends from claim 56 and is also challenged under Ground 2 as obvious over the combination of Blank, Schofield, and Klappenbach. Claim 57 is

patentable over the proposed combination at least for the same reasons discussed with respect to claim 56.

C. Claim 58

Claim 58 depends from claim 57, which depends from claim 56, and is also challenged under Ground 2 as obvious over the combination of Blank, Schofield, and Klappenbach. Claim 58 is patentable over the proposed combination for the same reasons discussed with respect to claims 57 and 56.

Claim 58 recites “wherein wiring that supplies at least one of power and a signal to said interior rearview mirror assembly passes through said housing.” TRW relies on Blank, Schofield, and Klappenbach as disclosing this claim feature. (Petition, pp. 49-50.) But TRW’s explanation regarding claim 58 is entirely deficient because it does not address the actual claim language.

TRW only discusses wiring that supplies at least one of power and a signal to the controller of Schofield residing in housing 2 of Klappenbach. (*Id.*) But this is not what is claimed. Instead, the claim requires the wiring to supply power or a signal to “said interior rearview mirror assembly.” Thus, while the claim requires the wiring to supply power or a signal to the rearview mirror assembly, TRW discusses supplying power or a signal to an accessory module. (*Id.*) The ’659 patent makes clear that the interior rearview mirror assembly is different than the accessory module. (’659 patent, 22:44-46 (“It should be noted that accessory

module is separate and distinct from interior mirror assembly 7910.”.) Thus, TRW fails to meet its burden in establishing a reasonable likelihood of success with respect to claim 58.

D. Claim 59

Claim 59 depends from claim 58, which depends from claims 57 and 56, and is also challenged under Ground 2 as obvious over the combination of Blank, Schofield, and Klappenbach. Claim 59 is patentable over the proposed combination for the same reasons discussed with respect to claims 58, 57, and 56.

Claim 59 recites “wherein said housing houses a plurality of accessories, one of which comprises a rain sensor.” As claimed, this requires both a forward facing camera **and** a rain sensor that is distinct from the forward facing camera. Thus, Schofield’s camera alone, even if it has rain sensing capabilities, does not disclose this claim feature. None of the asserted references disclose a structure that accommodates both a forward facing camera and a distinct rain sensor or any other plurality of accessories.

The references in combination are likewise deficient. Because of the different locations of the housing in Schofield and Klappenbach (spaced from the windshield vs. pressed against the windshield), the references in combination similarly do not disclose a structure that accommodates both devices or any other plurality of accessories.

In addition to the combination failing to disclose both a forward facing camera and a rain sensor accommodated by a single structure, this claim is not obvious over the asserted references because a POSA would not have combined Klappenbach's teachings of a rain sensor with Schofield's teachings of a camera. Specifically, because Schofield's camera already senses rain, a POSA would not have combined Klappenbach's separate teaching of a rain sensor.

Finally, TRW's explanation as to why the proposed combination renders this claim obvious is deficient. TRW merely states that "the claim is shown to be obvious for the reasons articulated in the discussion of claims 56-58 and further because multiple accessories are suggested and nothing unexpected occurs if a plurality of accessories are housed in the structure as claimed." (Petition, p. 50.) But TRW does not point out where in the references multiple accessories are suggested. Moreover, TRW does not adequately explain how the references suggest multiple accessories housed in the same housing. Accordingly, TRW's analysis is entirely deficient. Thus, the Board should deny institution for claim 59.

E. Claim 60

Claim 60 depends from claim 56 and is challenged under Ground 3 as obvious over the combination of Blank, Schofield, Klappenbach, Carter, and optionally Batavia. Carter and Batavia do not overcome the deficiencies discussed above with respect to claim 56. Claim 59 is patentable over the proposed

combination for the same reasons discussed with respect to claim 56.

Furthermore, even if the combination of Blank, Schofield, and Klappenbach is made, a POSA would not have combined Carter with Blank, Schofield, and Klappenbach. Claim 60 recites, in part, “wherein a light absorbing layer disposed at the vehicle windshield at least partially masks the presence of said attachment element.” TRW relies on Carter’s frit layer for this claim feature (Petition, pp. 51-52), but Carter does not disclose a light absorbing layer that covers a mirror mounting button or an area local to a mirror mounting button, which is the relevant location for Blank. Carter makes no disclosure or suggestion of concealing any mounting member of a mirror assembly or any other structure inboard of the periphery of the windshield.

Carter is directed to “vehicle accessories attached to glass and a method for attaching such accessories to glass.” (Carter, Ex. 1008, 1:12-14.) Carter discloses a frit layer to “conceal from the exterior any adhesive or mounting member attaching window panel 28 to the vehicle.” (*Id.* at 4:18-22.) The frit layer also conceals footprints of accessories attached to window panels (*id.* at 4:47-50), which are “the regions of the window panel which receive the accessory” (*id.* at 8:34-38).

But Carter never discusses providing an opaque coating at the windshield at the rearview mirror mount location that is separate and distant from the border perimeter region of the windshield. The background of Carter clarifies that its

disclosure is not even relevant to the rearview mirror mount: “*Other than the rear view mirror*, accessories have not been attached to the windshield/windscreen or overhead moon roof/sun roof because there was a concern for visual impairment and because the attachment techniques often required drilling a hole through the glass to keep the accessory from falling off.” (*Id.* at 1:19-24 (emphasis added).) This is reinforced by the fact that none of the examples provided in Carter address the rearview mirror. (*See id.* at FIGS. 2B-11.)

In fact, only one of the embodiments even addresses an accessory on the windshield. (*Id.* at FIGS. 10-11 (attaching a sun visor assembly to the windshield).) This embodiment teaches attaching a sun visor assembly to the windshield in the border area where the frit layer already exists and does not provide for an additional frit layer outside the peripheral edge. (*Id.* at 10:34-41.) As shown in FIG. 10 of Carter, Carter’s frit layer hugs and circumscribes the outermost border region of the windshield but does not cover or hide where an interior rearview mirror assembly attached to the windshield would be located. Carter depicts both header-mounted interior mirror assemblies (*id.* at FIG. 4A) and interior mirror assemblies attached to the windshield. (*Id.* at FIGS. 2A, 5A, 6A, 7). None of these interior mirror assemblies in Carter are covered or concealed by a frit layer. (*Id.* at FIGS. 2B, 4C, 5C.) None of the other figures display a frit layer at the location of the interior rearview mirror. (*Id.* at FIGS. 1, 8, 9, 10.) Carter does not disclose or

suggest any frit layer on the front windshield except in the peripheral edge.

Thus, Carter does not provide any motivation to place frit at the windshield at the mount of the rearview mirror or the area local to it, which is the relevant location for Blank. Accordingly, a POSA would not have combined Carter with Blank, Schofield, and Klappenbach. For this additional reason, the proposed combination fails to render claim 60 obvious.

F. Claim 61

Claim 61 depends from claim 60, which depends from claim 56, and is challenged under Ground 3 as obvious over the combination of Blank, Schofield, Klappenbach, Carter, and optionally Batavia. Carter and Batavia do not overcome the deficiencies discussed with respect to claim 56. Claim 61 is patentable over the proposed combination for the same reasons discussed with respect to claim 56.

Claim 61 recites, “wherein, with said structure received by and supported by said at least one attachment member, at least one of (a) a lowermost portion of said structure is disposed generally below said attachment element, (b) an uppermost portion of said structure is disposed generally above said attachment element, (c) a rightmost portion of said structure is disposed generally leftward of said attachment element and (d) a leftmost portion of said structure is disposed generally rightward of said attachment element.”

TRW makes two attacks against these claim features, but neither one

adequately explains how the proposed combination renders the claim obvious, as required by 37 C.F.R. § 42.104(b)(4). In its first attack, TRW does not even address the claim language and instead simply misconstrues the law of obviousness. In its second attack, TRW again fails to adequately address the claim language and misapplies the Batavia reference.

First, TRW alleges that these claim features are an immaterial matter of design choice and that “[a]ny such placement would be *prima facie* obvious and unsurprising because it would not be likely to interfere with the driver’s vision.” (Petition, p. 53.) TRW cites to *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1371 (Fed. Cir. 2007) as “relying on lack of unexpected results in determining that a species claim was obvious in view of prior art genus disclosure.” (*Id.*) But this case is not relevant here.

Contrary to TRW’s assertion, a lack of unexpected results does not establish a *prima facie* case of obviousness. Instead, unexpected results may be used to overcome a *prima facie* case. Thus, the lack of unexpected results in *Pfizer* failed to overcome a *prima facie* case. But here, TRW has not made a *prima facie* case, both for the reasons already discussed, and because TRW does not adequately address this very claim feature.

TRW’s discussion of undisclosed advantages and criticality are similarly irrelevant. (*Id.* at 54.) TRW’s suggestion that a claim element has no patentable

weight if that element does not provide an advantage disclosed in the specification is not the law. Moreover, criticality is another way to rebut a *prima facie* case of obviousness. It is also unclear how criticality applies in the claims at issue. Criticality generally comes into play where a claimed range is shown to be *prima facie* obvious. There is no claimed range here. In this entire discussion of design choice, undisclosed advantages, and criticality, TRW fails to establish that the asserted references disclose the relevant claim features. Thus, TRW has not established a *prima facie* case of obviousness and these points are irrelevant.

Second, TRW optionally relies on Batavia. But Batavia is deficient here. TRW relies on the repositionable nature of Batavia's suction cups to allege that any positioning of the structure is obvious. (Petition, p. 55.) But Batavia uses suction cups because its device was used for testing in multiple cars, not to reposition it within a car. (See Batavia, p. 1016-141.) In addition, where the claim requires at least one adhesively attached attachment member, the repositionable nature of Batavia is irrelevant in the combination because the suction cups would not be used to satisfy the claim features.

Moreover, Batavia relied on assuming a particular height of its camera and thus taught placement of the camera in the same place relative to the rearview mirror. (*Id.* at 1016-037 (“This means that camera height did not have to be measured at each installation, based on the assumption that each sedan (for

instance) has its rear-view mirror at the same height.”.) Thus, even if suction cups are repositionable, Batavia did not disclose placing these suction cups in various locations. Instead, Batavia taught placing the camera in the same place relative to the rearview mirror so that the camera height would be known without measuring it each time it was installed in a vehicle. For at least these reasons, Batavia does not disclose this claim feature and TRW fails to adequately explain how the proposed combination renders claim 61 obvious.

For at least the foregoing reasons, TRW fails to establish a reasonable likelihood of success of showing claims 56-61 to be obvious under Grounds 2 and 3. The Board should therefore deny institution on Grounds 2 and 3.

VII. TRW fails to provide a foundation for its proposed grounds of unpatentability

As petitioner, TRW bears the burden of showing that there is a reasonable likelihood of prevailing with respect to at least one challenged claim. 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.20(c). Yet TRW fails to provide a proper foundation for its proposed grounds of obviousness. Specifically, TRW fails to fully and properly consider the scope of the claims before applying the asserted references and also fails to resolve the level of ordinary skill in the art.

A. TRW fails to fully and properly consider the scope of the claims before applying the asserted references.

TRW proposes constructions for two claim terms: (1) “attachment member”

or “attachment members”; and (2) “local to said attachment element.” (Petition, pp. 6-8.) TRW overcomplicates the matter and, in doing so, fails to fully and properly consider the scope of the claims before applying the asserted references. Because this is a crucial element of determining obviousness, TRW’s analysis is flawed and TRW’s failure to properly construe the claim terms prevents TRW from establishing a reasonable likelihood of prevailing.

Two of the three key factual inquiries set forth in *Graham* for establishing obviousness under 35 U.S.C. § 103(a) are determining the scope and content of the prior art and ascertaining the differences between the prior art and the claims at issue. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). These inquiries necessarily involve an analysis of what the references and claims teach, and what is missing. This analysis is a two-step process: “‘the first step requires construing the claim,’ and ‘[t]he second step in the analysis requires a comparison of the *properly construed claim* to the prior art.’” *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010) (emphasis added) (quoting *Power MOSFET Techs., LLC v. Siemens AG*, 378 F.3d 1396, 1406 (Fed. Cir. 2004)). In sum, without a discernible claim construction, a proper patentability analysis cannot be performed. *Id.*; see also *Honeywell Int’l Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1342 (Fed. Cir. 2003); *ZTE Corp. v. ContentGuard Holdings, Inc.*, IPR2013-00139, Paper 15, p. 27 (P.T.A.B. Jul. 9, 2013).

In attempting to construe the terms “attachment member” and “attachment members,” TRW proposes “(1) a separate mount that is distinct from the attachment element *and* (2) adhesively attached to the windshield for support of a ‘structure’ that is built to accommodate a forward facing camera.” (Petition, p. 7.) Magna submits that “at least one attachment member” should have its plain and ordinary meaning and be construed as at least one attachment member, each being distinct and separate from the attachment element.

Further, “TRW proposes that ‘local to said attachment element’ be construed as proximate the attachment element.” (*Id.* at 7-8.) Magna submits that the term “local to said attachment element,” as used and claimed in the ’659 patent, should have its plain and ordinary meaning and should be construed as nearby but separate from the attachment element.

B. TRW fails to resolve the level of ordinary skill in the art.

In addition to failing to fully consider the scope of the claims before applying the references, TRW also fails to resolve the level of ordinary skill in the art. Resolving the level of ordinary skill in the art is the third *Graham* factor that is a fundamental inquiry in determining obviousness. *Graham*, 383 U.S. at 17-18. Because a finding of obviousness depends on the perspective of a POSA, resolving the level of ordinary skill in the art is necessary to maintain objectivity in the obviousness inquiry. *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir.

1991). Without determining the level of ordinary skill in the art and applying a consistent level, an obviousness analysis lacks meaning.

Here, TRW fails to resolve the level of ordinary skill in the art. Instead, the Petition provides one description of the level of ordinary skill in the art while Dr. Kazerooni provides two different descriptions. In addition, TRW fails to provide consistent descriptions of the level of ordinary skill across the eleven petitions challenging the '659 patent.

Here, the Petition asserts that a POSA is “one having at least the qualifications of or equivalent to either an undergraduate degree in mechanical engineering with course work or research in automobile accessory systems and with at least two years of work making automobile accessory systems.” (Petition, p. 18.) In contrast, Dr. Kazerooni states that a POSA “would have had at least the qualifications of or equivalent to an undergraduate degree in mechanical engineering with at least two years of work adapting computer vision systems for mounting in automobiles.” (Kazerooni Decl. ¶ 10.) In another portion of his Declaration, Dr. Kazerooni provides an additional conflicting description of a POSA as “one having at least the qualifications of or equivalent to either an undergraduate degree in electrical engineering or mechanical engineering with course work or research in automobile accessory systems and with at least two years of work making automobile accessory systems.” (*Id.* at 48.)

Besides the inconsistency within this case, TRW is inconsistent across the eleven petitions challenging the '659 patent. For example, in addition to the level indicated in this Petition, TRW also provides in another Petition that a POSA is “one having the qualifications of or equivalent to either an undergraduate degree in electrical engineering or mechanical engineering with course work or research in automobile accessory systems and with at least two years of work making automobile accessory systems.” (IPR2015-01433 Petition, Paper 2, p. 17.) In yet another Petition, TRW provides that a POSA is “one having at least the qualifications of or equivalent to either an undergraduate degree in mechanical engineering with course work or research in automobile accessory systems and with at least two years of work adapting computer vision systems for mounting in automobiles.” (IPR2015-01450 Petition, p. 19.)

These inconsistencies, along with the nested “or” statements in many of these descriptions, make it impossible to discern the hypothetical POSA that TRW and Dr. Kazerooni intend to convey. (See Kazerooni Decl. ¶ 48.) A reader of these multiple Petitions and Declarations is left to wonder which of (a) an undergraduate degree in electrical engineering, (b) an undergraduate degree in mechanical engineering, (c) course work in automobile accessory systems, (d) research in automobile accessory systems, (e) at least two years of work making automobile accessory systems, and (f) at least two years of work adapting computer vision

systems for mounting in automobiles—or some combination(s) thereof—are sufficient to meet TRW’s POSA standard. This lack of clarity fails to resolve the level of ordinary skill in the art as required to determine obviousness.

Finally, the contradictory POSA description proffered in Dr. Kazerooni’s Declaration states that the relevant time period he considered inappropriately extends far more recently in time than the November 10, 2000 priority date. (See Kazerooni Decl. ¶ 25 (“*Collectively*, these dates establish the timeframe for consideration of obviousness from the perspective of ordinary skill in the art,” and proceeding to refer to dates ranging from 1998 through 2012) (emphasis added).) That TRW and Dr. Kazerooni assert a 2012 priority date adds further question to whether Dr. Kazerooni bases his analysis on a POSA during the right time frame. This lack of focus on the appropriate time frame of the obviousness inquiry invites impermissible hindsight bias. Accordingly, TRW’s analysis is flawed, and TRW cannot establish a reasonable likelihood of success. For at least this reason, the Board should deny institution of *inter partes* review.

VIII. TRW’s failure to accurately identify all real parties in interest renders the Petition fatally defective requiring non-institution.

In addition to the deficiencies in the proposed combinations of each of the Grounds, the Petition is fatally defective because TRW failed to name ZF TRW Automotive Holdings Corp. (“TRW Holdings”) and ZF Friedrichshafen AG (“ZF”) as real parties in interest (“RPI”) as required by 35 U.S.C. § 312(a)(2). And

since TRW is now barred under § 315(b) from correcting its petition, institution should be denied.

TRW has the burden to establish that its RPI identification complies with the statute. *See Atlanta Gas Light Co. v. Bennett Regulator Guards, Inc.*, IPR2013-00453, Paper 88, p. 8 (P.T.A.B. Jan. 6, 2015); *Galderma S.A. v. Allergan Industrie, SAS*, IPR2014-01422, Paper 14, pp. 6-7 (P.T.A.B. Mar. 5, 2015). Determining whether an entity is an RPI is highly fact-dependent and there is no bright-line test. Office Patent Trial Practice Guide, 77 Fed. Reg. 48756, 48759 (Aug. 14, 2012). But the existence of a parent-wholly owned subsidiary relationship, along with other evidence, supports establishing an entity as an RPI. *See Galderma*, IPR2014-01422, Paper 14 at 12-13; *Atlanta Gas Light*, IPR2013-00453, Paper 88 at 9-12; *Paramount Home Entm't Inc. v. Nissim Corp.*, IPR2014-00961, Paper 11, p. 11 (P.T.A.B. Dec. 29, 2014); *Zerto, Inc. v. EMC Corp.*, IPR2014-01295, Paper 34, pp. 10-11 (P.T.A.B. Mar. 3, 2015); *but cf. Compass Bank v. Intellectual Ventures II LLC*, IPR2014-00724, Paper 12, pp. 10-11 (P.T.A.B. Nov. 6, 2014).

Evidence that supports establishing an entity as an RPI can include:

- a. The existence of a parent-wholly owned subsidiary relationship;
- b. An overlap in the Board of Directors, *see Galderma*, IPR2014-01422, Paper 14 at 12; *Zerto*, IPR2014-01295, Paper 34 at 10;
- c. Holding two entities out as a single entity under an umbrella term, *see*

Atlanta Gas Light, IPR2013-00453, Paper 88 at 11; *Zerto*, IPR2014-01295, Paper 34 at 10;

- d. Lack of distinction between the entities on a website, *see Atlanta Gas Light*, IPR2013-00453, Paper 88 at 11, *Zerto*, IPR2014-01295, Paper 34 at 10;
- e. Acquisition and integration of a company into corporate structure, *see Galderma*, IPR2014-01422, Paper 14 at 11-13; and
- f. Commingled financial reports or statements, *see Galderma*, IPR2014-01422, Paper 14 at 9-10; *Zerto*, IPR2014-01295, Paper 34 at 12.

Here, with respect to TRW Holdings, at least four of these factors (a, c, d, and f) are met by evidence presently available to Magna. Similarly, with respect to ZF, at least five of these factors (a, b, c, e, and f)—though not all the same factors—are met by evidence presently available to Magna. Thus, TRW Holdings and ZF should be found to be unnamed RPIs, making the Petition fatally defective.

A. TRW Holdings is an unnamed RPI.

While the Petition only identifies TRW Automotive U.S. LLC as the RPI, TRW also identifies TRW Holdings and “TRW Vehicle Safety Systems Inc.” as additional co-defendants in concurrent district court litigation involving the ’659 patent and as corporate entities “related to TRW,” without specifying the nature of the relationship. (Petition, pp. 3-5.)

TRW has admitted in concurrent district court litigation involving the '659 patent that co-defendant TRW Holdings is the ultimate parent corporation of TRW. (Answer, Ex. 2001, pp. 2-3.) Further, TRW Holdings and TRW are co-defendants in C.A. No. 13-1550-GMS. On August 7, 2015, TRW Automotive Holdings Corp. and TRW Automotive U.S. LLC amended its corporate disclosure statement under FRCP 7.1. (Amended Corp. Disclosure, Ex. 2002, p. 1.) There, TRW also provided that TRW is a wholly-owned subsidiary of TRW Automotive Inc. and that TRW Automotive Inc. is a wholly-owned subsidiary of TRW Holdings. (*Id.*) TRW Holdings undoubtedly exhibits a significant measure of control over TRW.⁵ As the Supreme Court stated, “[a] parent and its wholly owned subsidiary have a complete

⁵ In IPR2013-00609, the Board was persuaded that ZOLL Medical was an RPI for purposes of 35 U.S.C. § 315(b) because it “‘has the actual measure of control or opportunity to control that might reasonably be expected between two formal coparties.’” *ZOLL Lifecor Corp. v. Philips Electronics North America Corp.*, IPR2013-00609, Paper 15, p. 11 (P.T.A.B. Mar. 20, 2014) (citing to 77 Fed. Reg. 48756, 48759 (Aug. 14, 2012) (quoting Wright & Miller § 4451)). This finding was based on evidence presented by the patent owner that showed sufficiently that ZOLL Medical had exercised consistent control over the petitioner’s business since 2006. Similarly, TRW Holdings exercises consistent control over TRW’s business.

unity of interest,” and “the parent may assert full control at any moment if the subsidiary fails to act in the parent’s best interests.” *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 771-72 (1984). The Board has held that the opportunity to control may qualify an entity as an RPI. *See Galderma*, IPR2014-01422, Paper 14 at 12 (“We need not consider whether Mr. Antunes did or did not, directly or indirectly, exercise this control. It is sufficient that he had, in the words of *Gonzales*, ‘the power— . . . to call the shots.’”) (quoting *Gonzales v. Banco Cent. Corp.*, 27 F.3d 751, 758 (1st Cir. 1994)).

In fact, TRW Holdings’ most recently filed Annual Report with the U.S. Securities and Exchange Commission states that TRW Holdings “conduct[s] *substantially all of our operations* through subsidiaries. These operations primarily encompass the design, manufacture and sale of active and passive safety related products and systems. . . . [including] *driver assistance systems*.” (Form 10-K, Ex. 2003, p. 0005 (emphasis added).) The fact that the Annual Report purports to reflect the financial position and operating results of TRW Holdings and its wholly owned subsidiaries further suggests a tight financial integration. (*Id.* at 0059, *et seq.*; *see also id.* at 0064 (“The consolidated financial statements reflect the financial position and operating results of the Company, including wholly owned subsidiaries and investees that the Company controls.”).) That TRW is listed as a subsidiary without any indication of any entity other than TRW Holdings having

ownership further indicates that TRW is a wholly owned subsidiary. (*See id.* at 0126, 0130.)

In addition, TRW Holdings and TRW are held out as a single entity under the umbrella term of “TRW.” For example, in its press releases prior to the completed acquisition by ZF, TRW referred to both TRW Holdings and its subsidiaries as “TRW Automotive,” “TRW,” or the “Company.” (May 5 TRW Press Release, Ex. 2004 (“All references to ‘TRW Automotive’, ‘TRW’ or the ‘Company’ in this press release refer to TRW Automotive Holdings Corp. and its subsidiaries, unless otherwise indicated.”).) And TRW Holdings and TRW share the same website, www.trw.com, without a distinction between the two entities.

Thus, TRW appears to be attempting to evade the estoppel effect a final decision in this *inter partes* review may have by failing to name its co-defendant and parent entity TRW Holdings as an RPI. Because TRW is now barred by statute from correcting its Petition under 35 U.S.C. § 315(b) by virtue of having been served by Magna with a complaint alleging infringement more than one year ago, it is too late for TRW to cure this fatal defect.

B. ZF is an unnamed RPI.

On May 15, 2015, ZF announced that it had completed the acquisition of TRW Holdings. (May 15 ZF Press Release, Ex. 2005.) In light of this acquisition, ZF is also a required RPI. While TRW asserts that no other party could exercise

control over TRW's participation in this proceeding (Petition, p. 3), "TRW became a wholly-owned subsidiary of ZF." (May 15 ZF Press Release, p. 1.) Moreover, in C.A. No. 13-1550-GMS, TRW provided that TRW Holdings is a wholly-owned subsidiary of ZF North America, Inc. and ZF North America, Inc. is a wholly-owned subsidiary of ZF. (Amended Corp. Disclosure, p. 2.) With TRW Holdings and TRW as its wholly owned subsidiaries, ZF may assert full control at any moment. *See Copperweld*, 467 U.S. at 771-72. This further confirms that ZF is an unnamed RPI in this *inter partes* review.

In addition, "TRW will be incorporated into ZF as a new division called Active & Passive Safety Technology. The combined company operates under the name ZF Friedrichshafen AG." (May 15 ZF Press Release, p. 1.) As in *Galderma*, this acquisition and integration of TRW Holdings and its subsidiaries into its corporate structure as a business division indicates that ZF is an RPI. *See Galderma*, IPR2014-01422, Paper 14 at 12-13 (finding a parent entity to be an RPI based in part by the parent's "assertions that [the acquired wholly owned subsidiary] would 'form the foundation' and 'operate as the pharmaceutical arm' of its parent.")

Furthermore, TRW's website (www.trw.com) states "[t]he integration of TRW into the ZF Group offers strong growth potential" (TRW Website, Ex. 2006) and includes a link to the ZF website, where Dr. Stefan Sommer, CEO of ZF, states

“[w]ith the integration we do not only combine two industry champions, but create unique opportunities to grow substantially beyond the sum of our parts.” (ZF Website, Ex. 2007, p. 1.) TRW is thus integrated into the corporate structure of ZF.

While TRW indicates that TRW Holdings “has changed its name,” TRW fails to mention the acquisition of TRW Holdings by ZF. (Petition, p. 5, n. 10.) This change in name, as well as the statement from the press release, indicates that these entities will be identified with the umbrella term of “ZF.” Furthermore, ZF’s website lists several “TRW Automotive U.S. LLC” locations as its own U.S. locations, thus further supporting a finding that ZF is an RPI in this proceeding. (ZF Locations, Ex. 2008.)

ZF’s Board of Management is also nearly identical to TRW Holdings’ Board of Directors. (*Compare* ZF Management, Ex. 2009, *with* ZF TRW Directors, Ex. 2010.) In fact, the only difference is that Peter Lake is not currently on ZF’s Board of Management. But on October 1, 2015, Peter Lake will join ZF’s Board of Management, making the two Boards identical. (Dec. 18 ZF Press Release, p. 1.) Moreover, the CEO designate of TRW Holdings, Dr. Franz Kleiner, is listed on the ZF Board of Management as responsible for Region North America (*see* Ex. 2009), indicating that a member of ZF’s Board of Management also has the opportunity to call the shots. *See Galderma*, IPR2014-01422, Paper 14 at 12.

Furthermore, beginning with financial statements for the first half of 2015,

ZF has prepared consolidated financial statements that include financial statements of TRW Holdings and TRW. In fact, a “Financial Reports” link on TRW’s website routes to ZF’s website containing financial reports, including the consolidated financial statements for the first half of 2015. (Investor Relations, Ex. 2012, p. 2.) On that website, ZF states that “[u]ntil the completion of the acquisition of TRW, ZF and TRW have been legally independent companies with separate financial statements. . . . The first figures for the combined company according to IFRS will be presented with the half-year report.” (*Id.* at 1.)

In its Notes to the Condensed Interim Consolidated Financial Statements, ZF explains that its position is not comparable with the previous year because of “the obtainment of control over the ZF TRW Automotive Holdings Corp. (formerly TRW Automotive Holdings Corp.) (ZF TRW) on May 15, 2015 and the resulting initial inclusion in the consolidated interim financial statements.” (Consol. Financial Statements, Ex. 2013, p. 10.) Thus, ZF expressly states that financial statements of TRW Holdings are included in the consolidated financial statements. (*Id.* at 11.) ZF further states that “[w]ith the acquisition of ZF TRW 179 subsidiaries and 14 associates were acquired. All companies were included for the first time to the interim consolidated financial statements.” (*Id.* at 13.) As shown above, this inclusion of subsidiaries would include TRW, thus evidencing commingled financial statements of the companies.

ZF's control of TRW Holdings (as well as ZF's direct and active involvement in camera-based driver assistance systems that are the basis for the concurrent litigation in Federal Court concerning the '659 patent) is evidenced, for example, by the likes of an article downloaded from ZF's website (www.zf.com) describing "ZF's Highway Driving Assist system" and stating that "ZF TRW has been producing driver-assist systems like this for a long time – increasingly, they're becoming standard equipment in the automotive industry. Starting in 2017, for example, all Peugeot, Citroën and DS models will be equipped with the latest camera and radar technology from ZF TRW." (ZF Article, Ex. 2014, p. 2.)

The combination of these multiple factors supports a finding that ZF is an unnamed RPI. Thus, TRW fails to accurately identify all RPIs. Because TRW is now barred by statute from correcting its Petition under 35 U.S.C. § 315(b) by virtue of having been served by Magna with a complaint alleging infringement more than one year ago, it is too late for TRW to cure this fatal defect.

In the end, TRW failed to name two required parties in its RPI statement, and cannot now correct this fatal defect since it is time barred. For this reason alone, institution should be denied.

IX. Conclusion

For the foregoing reasons, the Board should not institute this *inter partes* review on any proposed ground.

Respectfully submitted,

/Mark W. Rygiel/

David K.S. Cornwell (Registration No. 31,944)
Mark W. Rygiel (Registration No. 45,871)
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Timothy A. Flory (Registration No. 42,540)
Terence J. Linn (Registration No. 30,283)
GARDNER, LINN, BURKHART & FLORY LLP

ATTORNEYS FOR PATENT OWNER
MAGNA ELECTRONICS, INC.

Date: October 1, 2015

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

2068151.DOCX

CERTIFICATION OF SERVICE (37 C.F.R. § 42.6(e))

The undersigned hereby certifies that the foregoing **PATENT OWNER MAGNA ELECTRONICS INC.'S PRELIMINARY RESPONSE TO PETITION PURSUANT TO 37 C.F.R. § 42.107** and all associated Exhibits were served electronically via email on October 1, 2015 in their entirety on TRW.

Timothy K. Sendek (Lead Counsel)
Allan Sternstein (Back-up Counsel)
A. Justin Poplin (Back-up Counsel)
Dan Cleveland Jr. (Back-up Counsel)

Lathrop & Gage LLP
IP Docketing, Inter Partes Review
2345 Grand Blvd., Ste. 2400
Kansas City, Missouri 64108

Patent@LathropGage.com
TSendek@LathropGage.com
ASternstein@LathropGage.com
JPoplin@LathropGage.com
DCleveland@LathropGage.com

Date: October 1, 2015

/Mark W. Rygiel/

MARK W. RYGIEL, REGISTRATION NO. 45,871
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, NW
WASHINGTON, D.C. 20005
(202) 371-2600

ATTORNEY FOR PATENT OWNER
MAGNA ELECTRONICS, INC.