

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BMW OF NORTH AMERICA, LLC,

Petitioner

v.

CARRUM TECHNOLOGIES, LLC,

Patent Owner

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Case No. IPR2019-00927

Patent No. 7,512,475

Title: AUTOMATIC LATERAL ACCELERATION LIMITING  
AND NON THREAT TARGET REJECTION

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**LIST OF EXHIBITS**

<b>Exhibit 1001</b>	U.S. Patent No. 7,512,475 to Robert A. Perisho, Jr., and Jeremy S. Greene, titled “Automatic Lateral Acceleration Limiting and Non Threat Target Rejection,” filed on May 19, 2004, and issued on March 31, 2009 (“the ’475 patent”).
<b>Exhibit 1002</b>	File History of U.S. Patent No. 7,512,475.
<b>Exhibit 1003</b>	Expert Declaration of Azim Eskandarian, D.Sc. in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 7,512,475.
<b>Exhibit 1004</b>	U.S. Patent No. 6,456,924 to Schmitt (“ <i>Schmitt</i> ”)
<b>Exhibit 1005</b>	U.S. Patent Application Publication No. 2002/0165657 to Winner and Lueder (“ <i>Winner</i> ”)
<b>Exhibit 1006</b>	U.S. Patent No. 5,627,756 to Fukada (“ <i>Fukada</i> ”)
<b>Exhibit 1007</b>	U.S. Patent No. 5,959,569 to Khodabhai (“ <i>Khodabhai</i> ”)
<b>Exhibit 1008</b>	Excerpt of RULES OF THE ROAD, ILL. DMV (2001)

## I. PRELIMINARY STATEMENT

Petitioner BMW of North America, LLC requests *Inter Partes* Review (“IPR”) of claims 1-12 of U.S. Patent No. 7,512,475 (“Challenged Claims”), assigned to Patent Owner Carrum Technologies, LLC. The Challenged Claims are directed to a vehicle equipped with an adaptive cruise control (“ACC”) system that provides control in turning situations by limiting lateral acceleration during the vehicle turn, Ex. 1001, 2:47-50, something that was well known before the earliest claimed priority date of the ’475 patent. Indeed, the subject matter of the Challenged Claims is expressly disclosed and/or rendered obvious by the art submitted in this Petition.

Independent claims 1 and 6 recite methods of controlling a vehicle having an ACC system. Ex. 1001, 8:7-51. The ACC system monitors the speed of the equipped vehicle and decreases the vehicle’s speed when the vehicle is in a turn or an object is in the same lane as the vehicle. *Id.* But this concept was well known before the ’475 patent was filed. For example, *Winner* discloses an ACC system capable of detecting the location of an object in a turn and determining whether the object is located within the path of the host vehicle, and reducing the vehicle’s speed if the object is within the path. *Winner*, ¶ 0008; *id.*, Fig. 1. Furthermore, *Fukada* discloses a vehicle controller that reduces the occurrence of vehicle loss of control during a turn as the result of excessive lateral acceleration. *Fukada*, 1:6-

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