

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAYERISCHE MOTOREN WERKE AKTIENGESELLSCHAFT and
BMW OF NORTH AMERICA, LLC,
Petitioners

v.

PAICE LLC & THE ABELL FOUNDATION
Patent Owner

Case IPR2020-01299
Patent 8,630,761

**DECLARATION OF MAHDI SHAHBAKHTI PH.D.
IN SUPPORT OF THE PATENT OWNER'S RESPONSE**

TABLE OF CONTENTS

I.	INTRODUCTION	5
II.	QUALIFICATIONS AND EXPERIENCE.....	6
III.	LEGAL UNDERSTANDING	14
IV.	DEFINITION OF A PERSON OF SKILL IN THE ART	16
V.	THE '761 PATENT.....	17
VI.	CLAIM CONSTRUCTIONS	26
VII.	ANALYSIS AND OPINIONS	27
A.	Ground 1: The proposed combination of Severinsky and Quigley does not render obvious claims 1-12.....	27
1.	Neither Severinsky nor Quigley “derive[] a predicted near-term pattern of operation of said hybrid vehicle”	27
2.	Neither Severinsky nor Quigley disclose “wherein said derived predicted pattern of operation comprises at least one repetitive pattern of operation of said hybrid vehicle.” (Claims 2 and 8).....	32
3.	Neither Severinsky nor Quigley disclose “wherein said controller monitors variation in road load experienced by said hybrid vehicle and compares patterns of variation in road load experienced from day to day in order to identify said repetitive patterns of operation of said hybrid vehicle.” (Claims 4 and 10).....	33
4.	A person of skill in the art would not combine Severinsky and Quigley	40
B.	Ground 2: The proposed combination of Severinsky and Nii does not render obvious claims 1-12.....	50

1. Neither Severinsky nor Nii “derive[] a predicted near-term pattern of operation of said hybrid vehicle”50
2. Neither Severinsky nor Nii disclose “wherein said derived predicted pattern of operation comprises at least one repetitive pattern of operation of said hybrid vehicle.” (Claims 2 and 8)55
3. Neither Severinsky nor Nii disclose “wherein said controller monitors variation in road load experienced by said hybrid vehicle and compares patterns of variation in road load experienced from day to day in order to identify said repetitive patterns of operation of said hybrid vehicle.” (Claims 4 and 10).....56
4. Severinsky’s parallel hybrid architecture vs. Nii’s series hybrid architecture59
5. Nii’s use of vehicle patterns has no applicability to Severinsky’s parallel hybrid control system.....69

DECLARATION EXHIBITS

Exhibit Number	Exhibit Name
Ex. 2017	Curriculum Vitae of Mahdi Shahbakhti, Ph.D.
Ex. 2018	Reserved
Ex. 2019	Reserved
Ex. 2020	Selected Pages From Merhdad Ehsani et al, Modern Electric, Hybrid Electric, and Fuel Cell Vehicles
Ex. 2021	Reserved
Ex. 2022	Reserved
Ex. 2023	Reserved
Ex. 2024	Reserved
Ex. 2025	Reserved
Ex. 2026	Reserved
Ex. 2027	Reserved
Ex. 2028	Reserved
Ex. 2029	Oxford Dictionary
Ex. 2030	The Illustrated Dictionary of Electronics
Ex. 2031	Encarta World English Dictionary
Ex. 2032	Selected Pages From Handbook of Air Pollution From Internal Combustion Engines
Ex. 2033	Selected Pages From Guzzella et al., Vehicle Propulsion Systems

I, Mahdi Shahbakhti, hereby declare the following:

I. INTRODUCTION

1. I have been retained by counsel for Paice LLC and the Abell Foundation (collectively, “Paice” or “Patent Owner”) to investigate and analyze certain issues relating to the validity of claims of U.S. Patent No. 8,630,761 (“the ’761 patent”).

2. For purposes of this declaration, I have been asked to analyze the arguments made by Bayerische Motoren Werke Aktiengesellschaft and BMW of North America, LLC (“BMW” or “Petitioners”) related to Grounds 1 and 2 in the matter of the *Inter Partes* Review of the ’761 patent, Case No. IPR2020-01299, as shown in the table below.

Ground 1	Severinsky/Quigley	Claims 1-12
Ground 2	Severinsky/Nii	Claims 1-12

In addition to the grounds and noted claims above, I have also reviewed the petition as well as the declaration of BMW’s expert, Dr. Davis (and the documents cited therein) pertaining to these grounds. I have also reviewed the Patent Trial and Appeal Board’s (“the Board”) decision to institute regarding these grounds, as well as the Board’s claim constructions. My analysis is based on the Board’s claim constructions, unless I specifically note otherwise.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.