

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

**BAYERISCHE MOTOREN WERKE AKTIENGESELLSCHAFT &  
BMW OF NORTH AMERICA, LLC,**  
Petitioners

v.

**PAICE LLC & THE ABELL FOUNDATION, INC.**  
Patent Owners

---

*Inter Partes* Review No.: To Be Assigned

U.S. Patent No. 8,630,761 K2

---

DECLARATION OF DR. GREGORY W. DAVIS

**BMW 1008**

**Table of Contents**

I. QUALIFICATIONS AND PROFESSIONAL EXPERIENCE ..... 9

II. RELEVANT LEGAL STANDARDS .....17

III. QUALIFICATIONS OF ONE OF ORDINARY SKILL IN THE ART .19

IV. STATE OF THE ART .....20

    A. “Series” Hybrid Vehicle.....24

    B. “Parallel” Hybrid Vehicle .....27

    C. Hybrid Vehicle “Control Strategies” .....33

    D. Severinsky - U.S. Patent No. 5,343,970 .....45

    E. Utilizing Patterns in Motor Vehicle Control.....47

V. The ’761 Patent.....54

    A. Effective Filing Date of the ’761 Patent.....54

    B. Specification of the ’761 Patent .....55

    C. Prosecution History of the ’761 Patent.....59

VI. CHALLENGED CLAIMS OF THE ’761 PATENT AND PROPOSED CLAIM CONSTRUCTIONS .....62

VII. GROUND 1 – CLAIMS 1-12 ARE OBVIOUS OVER SEVERINSKY IN VIEW OF QUIGLEY .....64

    A. Claim 1 .....64

    B. Claim 2 .....84

    C. Claim 3 .....86

    D. Claim 4 .....86

    E. Claim 5 .....92

    F. Claim 6 .....108

    G. Claim 7 .....111

H.	Claim 8 .....	114
I.	Claim 9 .....	114
J.	Claim 10 .....	114
K.	Claim 11 .....	114
L.	Claim 12 .....	114
VIII.	GROUND 2 – CLAIMS 1-12 ARE OBVIOUS OVER SEVERINSKY IN VIEW OF NII .....	115
A.	Claim 1 .....	115
B.	Claim 2 .....	123
C.	Claim 3 .....	124
D.	Claim 4 .....	125
E.	Claim 5 .....	126
F.	Claim 6 .....	130
G.	Claim 7 .....	132
H.	Claim 8 .....	135
I.	Claim 9 .....	135
J.	Claim 10 .....	135
K.	Claim 11 .....	135
L.	Claim 12 .....	135
IX.	GROUND 3 – CLAIMS 1-2, 5-8, 11-12 ARE OBVIOUS OVER SEVERINSKY IN VIEW OF GRAF .....	136
A.	Claim 1 .....	136
B.	Claim 2 .....	145
C.	Claim 5 .....	146
D.	Claim 6 .....	150
E.	Claim 7 .....	152

F.	Claim 8 .....	154
G.	Claim 9 .....	154
H.	Claim 10 .....	154
I.	Claim 11 .....	155
J.	Claim 12 .....	155
X.	OBJECTIVE EVIDENCE OF NONOBVIOUSNESS .....	155
XI.	CONCLUSION .....	156

## LIST OF EXHIBITS

Exhibit No.	Description of Exhibit
BMW1001	U.S. Patent No. 8,630,761
BMW1002	USPTO Assignments on the Web for U.S. Patent No. 7,104,347 K2
BMW1003	<i>Ford Motor Co. v. Paice LLC</i> , IPR2014-00571, Paper 44, Final Written Decision (P.T.A.B. Sep. 28, 2015)
BMW1004	<i>Ford Motor Co. v. Paice LLC</i> , IPR2014-00579, Paper 45, Final Written Decision (P.T.A.B. Sep. 28, 2015)
BMW1005	<i>Paice LLC v. Ford Motor Co.</i> , Appeal Nos. 2016-1412, -1415, -1745, Doc. 46-2, Opinion (Fed. Cir. Mar. 7, 2017)
BMW1006	<i>Ford Motor Co. v. Paice LLC</i> , IPR2015-00794, Paper 31, Final Written Decision (P.T.A.B. Nov. 1, 2016)
BMW1007	<i>Paice LLC v. Ford Motor Co.</i> , Appeal Nos. 2017-1442, -1443, Doc. 59-2, Opinion (Fed. Cir. Feb. 1, 2018)
BMW1008	Declaration of Dr. Gregory W. Davis in Support of <i>Inter Partes</i> Review of U.S. Patent No. 8,630,761
BMW1009	<i>Curriculum Vitae</i> of Dr. Gregory W. Davis, Ph.D., P.E.
BMW1010	<i>Ford Motor Co. v. Paice LLC</i> , IPR2015-00795, Paper 31, Final Written Decision (P.T.A.B. Nov. 1, 2016)
BMW1011	<i>Ford Motor Co. v. Paice LLC</i> , IPR2014-00884, Paper 38, Final Written Decision (P.T.A.B. Dec. 10, 2015)
BMW1012	RESERVED
BMW1013	U.S. Patent No. 5,343,970 (“Severinsky”)
BMW1014- BMW1019	RESERVED
BMW1020	U.S. Patent No. 6,188,945 (“Graf”)
BMW1021	RESERVED
BMW1022	U.S. Patent No. 5,650,931 (“Nii”)
BMW1023	<i>Innovations in Design: 1993 Ford Hybrid Electric Vehicle Challenge</i> , Society of Automotive Engineers, SAE/SP-

BMW 1008

# 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.