

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOMTOM, INC.,
Petitioner,

v.

BLACKBIRD TECH LLC d/b/a BLACKBIRD TECHNOLOGIES,
Patent Owner.

Case IPR2017-02023
Patent 6,434,212

**DECLARATION OF MICHAEL CALOYANNIDES, PH.D., IN SUPPORT
OF PATENT OWNER'S RESPONSE TO PETITION**

I. INTRODUCTION

1. I, Dr. Michael Caloyannides, have been retained by Patent Owner Blackbird Tech LLC d/b/a Blackbird Technologies (“Blackbird” or “Patent Owner”) to provide my opinions in support of their Response to the Petition for *Inter Partes* Review of U.S. Patent No. 6,434,212 to Pyles, issued on August 13, 2002 (“’212 Patent,” Ex. 1001) pursuant to the legal standards set forth below. I am being compensated for my time at the rate of \$200 per hour for time spent on both non-deposition tasks and for deposition time. I have no interest in the outcome of this proceeding, and no part of my compensation is contingent upon the outcome of this proceeding.

2. I have also been asked to provide my technical review, analysis, insights, and opinions regarding the Declaration of Thomas Blackadar (“Blackadar Declaration,” Ex. 1002) on the patentability of claims 1-8 of the ‘212 patent and TomTom, Inc.’s (“Petitioner” or “TomTom”) Petition that relies on the Blackadar Declaration. I have also reviewed the deposition transcript of Mr. Blackadar from June 27, 2018 (Ex. 1022).

3. In preparing this Declaration, I have also reviewed U.S. Patent No. 4,367,752 to Jimenez, et al. (“Jimenez,” Ex. 1002); U.S. Patent No. 5,583,776 to Levi et al. (“Levi,” Ex. 1003); and U.S. Patent No. 6,145,389 to Ebeling et al. (“Ebeling,” Ex. 1004).

4. I have also reviewed portions of the file history of the '212 patent (Ex. 1009), and its parent, U.S. Patent No. 6,175,608 (Ex. 1010) as well as other documents referenced below in this Declaration.

5. This declaration sets forth the opinions I have formed in this case based on my study of the evidence, my understanding as an expert in the field, and my education, training, research, knowledge, and personal and professional experience.

II. BACKGROUND AND QUALIFICATIONS

6. Until very recently, I was Senior Scientist for TASC, Inc., a technology company located in Northern Virginia, and since December 2013, I am an independent consultant in the fields of telecommunications, radar, radio navigation, signal processing, and Information Technologies. I am also an adjunct professor at both Johns Hopkins University and George Washington University. I have also been a consultant to NASA/NIAC for approximately ten years.

7. I believe that I am well qualified to serve as a technical expert in this matter based upon my educational and work experience.

8. Until mid-December 2013, I was employed by TASC, Inc. as a Senior Scientist. TASC, Inc. is a northern Virginia-based consulting firm providing cutting-edge technological, scientific, management and security solutions to the US Federal Government in general and to the US Intelligence Community in particular. That firm specialized in the following areas: Analog and digital telecommunications and design

and testing of transmitters and receivers for such telecommunication; radio navigation; signal processing; mathematical solutions to a broad spectrum of technological problems; telecommunications through all media and channels; Advanced Physical Security; Computer Forensics; Rapid Response Program Management; Avionics, and Database and Software Engineering. As Senior Scientist at TASC, I contributed to many of the firm's numerous scientific and technological efforts in the above fields, specifically including an assessment of transmitters and receivers for telecommunications and the evolving cellular infrastructure.

9. I also currently serve as adjunct faculty to George Washington and Johns Hopkins Universities, a position I have held for numerous years.

10. I received a Ph.D. in Electrical Engineering, Applied Mathematics and Philosophy from the California Institute of Technology ("Caltech") in 1972. I also hold an M.S. in Electrical Engineering ('68) and a BSc in Science with honors ('67), both awarded by Caltech.

11. Immediately prior to joining TASC, Inc., I was the Chief Scientist for Ideal Innovations, Inc. ("I-3"), a Northern Virginia technology solutions provider to the US Government. During my two year employment with I3, that company was recognized as one of the fastest growing companies in the United States.

12. Prior to joining I-3, I worked from 1999 to 2006 as a Senior Fellow with Mitretek Systems (now renamed Noblis), a Washington, DC area "think tank" in

mathematical analyses and solutions to various aspects of telecommunications of voice, video, data, and telemetry, including RF technologies, cellular telecom, digital networks, computer forensics, radar, radio navigation, and related aspects of the broad discipline of telecommunications.

13. From 1998 to 1999 I worked for Boeing Corp., which is primarily a Systems Integrator for complex electronics, as a Senior Scientist. I was responsible for managing Boeing's entry into the commercial information technology business as well as the broadband commercial satellite telecommunications industry for aircraft. I also maintained technical oversight of the U.S. Department of Defense's satellite-based location-tracking of all Army mobile platforms, specifically including the design, analysis and testing of transmitters and receivers.

14. From 1984 to 1998, I was a Senior Scientist (SIS-3 senior executive level) for a U.S. Government agency. Half that time was spent leading the technical oversight of field operations, while I served as Chief Scientist in the Research & Development division for the remaining 7 years. I supervised the technical and strategic aspects of most new technical developments in a wide spectrum of fields, including:

- Analog and digital telecommunications.
- Radar and radio navigation.
- Covert communications.
- Signal exploitation: interception, spoofing.

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.