

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

WIZ, INC.,  
Petitioner,

v.

ORCA SECURITY LTD,  
Patent Owner.

---

Case IPR2024-01191  
Patent No. 11,775,326

---

**DECLARATION OF DR. ANGELOS STAVROU**

## TABLE OF CONTENTS

I.	ENGAGEMENT.....	1
II.	QUALIFICATIONS.....	1
III.	COMPENSATION.....	3
IV.	INFORMATION CONSIDERED.....	3
V.	LEGAL PRINCIPLES.....	4
VI.	THE RELEVANT TIMEFRAME FOR ANALYSIS.....	7
VII.	PERSON OF ORDINARY SKILL IN THE ART.....	8
VIII.	STATE OF THE ART.....	8
	A. Virtualization.....	9
	B. Snapshots.....	21
	C. Cloud Computing.....	29
	D. Cyber Security.....	37
	1. Types of Security Risks.....	38
	2. Detecting Security Risks.....	47
	3. Responding to Security Risks.....	63
IX.	OVERVIEW OF THE '326 PATENT.....	71
	A. Challenged Claims.....	73
	B. Prosecution History of the '326 Patent.....	76
X.	CLAIM CONSTRUCTION.....	76
	A. Determining a “Location” of a Snapshot.....	77
	B. “Analyzing the Snapshot”.....	78

XI.	OVERVIEW OF THE PRIOR ART .....	79
A.	Veselov (U.S. Patent No. 11,216,563, EX1007).....	79
B.	Basavapatna (U.S. Pub. No. 2013/0191919, EX1008) .....	85
C.	Czarny (U.S. Patent No. 9,749,349; EX1084) .....	89
D.	Giakouminakis (U.S. Patent No. 9,141,805; EX1044) .....	93
XII.	GROUND 1: CLAIMS 1-21 AND 28 WERE OBVIOUS OVER VESELOV AND BASAVAPATNA .....	94
A.	Reasons to Combine Veselov and Basavapatna.....	95
B.	Independent Claims 1, 15, and 18.....	102
1.	Preambles .....	103
2.	Element 18.i .....	107
3.	Elements 1.1, 15.1, and 18.1 .....	108
4.	Elements 1.2, 15.2, and 18.2.....	111
5.	Elements 1.3, 15.3, and 18.3.....	142
6.	Elements 1.4, 15.4, and 18.4.....	145
C.	Dependent Claims .....	149
1.	Claims 2 and 19.....	149
2.	Claim 3.....	152
3.	Claims 4, 16, and 17 .....	160
4.	Claim 5.....	167
5.	Claim 6.....	170
6.	Claim 7 .....	173
7.	Claim 8.....	175
8.	Claim 9.....	181
9.	Claim 10.....	186
10.	Claim 11 .....	192

11. Claim 12.....	194
12. Claim 13.....	196
13. Claim 14.....	199
14. Claim 20.....	209
15. Claim 21.....	210
16. Claim 28.....	211
<b>XIII. GROUND 2: CLAIMS 4-5 AND 17 WERE OBVIOUS OVER VESELOV, BASAVAPATNA, AND CZARNY .....</b>	<b>213</b>
A. Reasons to Combine Veselov, Basavapatna, and Czarny .....	214
B. Claims 4 and 17 .....	219
C. Claim 5 .....	223
<b>XIV. GROUND 3: CLAIMS 22-27 WERE OBVIOUS OVER VESELOV, BASAVAPATNA, AND GIAKOUMINAKIS.....</b>	<b>226</b>
A. Reasons to Combine Veselov, Basavapatna, and Giakouminakis....	227
B. Claims 22 and 27 .....	232
1. Elements 22.1 and 27.1 .....	232
2. Elements 22.2 and 27.2.....	237
C. Claim 23 .....	240
D. Claim 24 .....	246
E. Claim 25 .....	249
F. Claim 26 .....	252
<b>XV. CONCLUDING STATEMENTS.....</b>	<b>253</b>
<b>XVI. APPENDIX A – MATERIALS CITED.....</b>	<b>254</b>

I, Angelos Stavrou, declare as follows:

**I. ENGAGEMENT**

1. I have been retained by counsel for Wiz, Inc. as an expert witness in the above-captioned proceeding. I have been asked to provide my opinion about the state of the art of the technology described in U.S. Patent No. 11,775,326 (the “’326 patent”) and on the patentability of claims 1-28 of this patent. The following is my written testimony on these topics.

**II. QUALIFICATIONS**

2. I received my M.Sc. in Electrical Engineering, M.Phil., and Ph.D. (with distinction) in Computer Science all from Columbia University. I also hold an M.Sc. in theoretical Computer Science from the University of Athens and a B.Sc. in Physics with distinction from the University of Patras, Greece.

3. I am a Virginia Tech Innovation Campus founding Professor, and the Entrepreneurship activities lead. I am also a member of the Bradley Department of Electrical & Computer Engineering at Virginia Tech. From 2017 to 2020, I was a Professor in the Computer Science Department at George Mason University (“GMU”), teaching courses including Operating Systems Security and Cyber Security Laboratory. From 2012 to 2017, I was an Associate Professor in GMU’s Computer Science Department, teaching courses including Operating Systems Security, Enterprise Security Practices, and Enterprise Security Technology. From



# 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.