

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EPIC GAMES, INC.,
Petitioner,

v.

INGENIOSHARE, LLC,
Patent Owner

**U.S. PATENT NO. 10,708,727
U.S. PATENT NO. 10,492,038**

Case IPR2022-TBD
Case IPR2022-TBD

**DECLARATION OF DR. KEVIN ALMEROOTH
IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S.
PATENT NOS. 10,708,727 AND 10,492,038**

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| I. INTRODUCTION | 5 |
| II. BACKGROUND AND QUALIFICATIONS..... | 6 |
| III. MATERIALS AND OTHER INFORMATION CONSIDERED | 19 |
| IV. UNDERSTANDING OF PATENT LAW | 20 |
| V. SUMMARY OF OPINIONS..... | 23 |
| VI. OVERVIEW OF TECHNOLOGY AND OF THE CHALLENGED PATENTS | 24 |
| A. Technological Background | 24 |
| 1. Network Protocols and Architecture..... | 24 |
| 2. Modes of Internet Communications | 28 |
| B. Overview of the '727 Patent..... | 32 |
| 1. Claims | 33 |
| 2. Summary of the Specification..... | 33 |
| 3. Summary of the Prosecution History..... | 35 |
| C. Overview of the '038 Patent..... | 36 |
| 1. Claims | 36 |
| 2. Summary of the Specification..... | 37 |
| 3. Summary of the Prosecution History..... | 39 |
| VII. LEVEL OF ORDINARY SKILL IN THE ART | 41 |
| VIII. DETAILED INVALIDITY ANALYSIS..... | 42 |
| A. Background on Prior Art References | 42 |
| 1. Overview of Diacakis (Ex. 1007) | 42 |

Ex. 1003 – Declaration of Kevin C. Almeroth, Ph.D.

| | |
|---|-----------|
| 2. Overview of Loveland (Ex. 1008) | 46 |
| 3. Overview of Takahashi (Ex. 1009)..... | 47 |
| 4. Overview of Tanigawa (Ex. 1010)..... | 49 |
| 5. Overview of Hullfish (Ex. 1011) | 52 |
| IX. The '727 Patent | 53 |
| A. Ground I: Claims 1–6, 15, and 17 Are Rendered Obvious by Diacakis | 53 |
| 1. Independent Claim 1 | 53 |
| 2. Dependent Claim 2 | 76 |
| 3. Dependent Claim 3 | 77 |
| 4. Dependent Claim 4 | 78 |
| 5. Dependent Claim 5 | 79 |
| 6. Dependent Claim 6 | 80 |
| 7. Dependent Claim 15 | 82 |
| 8. Dependent Claim 17 | 85 |
| B. Ground II: Claims 7–9 Are Rendered Obvious by Diacakis and Loveland..... | 86 |
| 1. Motivation to Combine | 86 |
| 2. Dependent Claim 7 | 92 |
| 3. Dependent Claim 8 | 92 |
| 4. Dependent Claim 9 | 93 |
| C. Ground III: Claim 16 Is Rendered Obvious by Diacakis and Takahashi..... | 94 |
| 1. Motivation to Combine | 94 |

Ex. 1003 – Declaration of Kevin C. Almeroth, Ph.D.

| | |
|---|------------|
| 2. Dependent Claim 16 | 98 |
| D. Ground IV: Claims 1–3, 6, 15, and 17 Are Rendered Obvious by Tanigawa and Hullfish | 100 |
| 1. Motivation to Combine | 100 |
| 2. Independent Claim 1 | 107 |
| 3. Dependent Claim 2 | 126 |
| 4. Dependent Claim 3 | 128 |
| 5. Dependent Claim 6 | 128 |
| 6. Dependent Claim 15 | 130 |
| 7. Dependent Claim 17 | 132 |
| E. Ground V: Claims 7–9 Are Rendered Obvious by Tanigawa, Hullfish, and Loveland | 132 |
| 1. Motivation to Combine | 132 |
| 2. Dependent Claim 7 | 136 |
| 3. Dependent Claim 8 | 136 |
| 4. Dependent Claim 9 | 137 |
| F. Ground VI: Claim 16 Is Rendered Obvious by Tanigawa, Hullfish, and Takahashi | 138 |
| 1. Motivation to Combine | 138 |
| 2. Dependent Claim 16 | 141 |
| X. The '038 Patent | 142 |
| A. Ground I: Claims 7, 10–12, 22–24, 33–36, 38–41, 46, 49, 51–53, 55, 57–58, and 64–66 Are Rendered Obvious by Diacakis | 142 |
| 1. Independent Claim 7 | 142 |
| 2. Dependent Claim 10 | 164 |

Ex. 1003 – Declaration of Kevin C. Almeroth, Ph.D.

| | | |
|-----|----------------------------|-----|
| 3. | Dependent Claim 11 | 165 |
| 4. | Dependent Claim 12 | 166 |
| 5. | Dependent Claim 22 | 169 |
| 6. | Dependent Claim 23 | 170 |
| 7. | Dependent Claim 24 | 170 |
| 8. | Dependent Claim 33 | 171 |
| 9. | Dependent Claim 34 | 172 |
| 10. | Dependent Claim 35 | 173 |
| 11. | Dependent Claim 36 | 174 |
| 12. | Independent Claim 38 | 176 |
| 13. | Dependent Claim 39 | 179 |
| 14. | Dependent Claim 40 | 179 |
| 15. | Dependent Claim 41 | 180 |
| 16. | Independent Claim 46 | 180 |
| 17. | Dependent Claim 49 | 184 |
| 18. | Dependent Claim 51 | 192 |
| 19. | Dependent Claim 52 | 193 |
| 20. | Dependent Claim 53 | 194 |
| 21. | Dependent Claim 55 | 195 |
| 22. | Dependent Claim 57 | 195 |
| 23. | Dependent Claim 58 | 196 |
| 24. | Dependent Claim 64 | 197 |
| 25. | Dependent Claim 65 | 198 |

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.