

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

Zentian Limited
Patent Owner.

Case IPR2023-00037
Patent No. 10,971,140

**PATENT OWNER'S RESPONSE
[CORRECTED]**

TABLE OF CONTENTS

I.	Introduction	1
II.	Background of the '140 Patent	3
III.	Person of ordinary skill in the art	6
IV.	The POSA would not have had a reasonable expectation of success with respect to the Petition's combination of Jiang and Chen	7
V.	The Petition and Mr. Schmandt fail to demonstrate a motivation to combine Jiang with Chen	16
VI.	The Petition fails to show obviousness as to limitations 1(d) and 1(e)	27
VII.	Conclusion	35

EXHIBIT LIST

Exhibit No.	Description
2017	Deposition of Christopher Schmandt dated September 6, 2023
2018	<i>Intentionally left blank</i>
2019	Hennessy & Patterson, <i>Computer Architecture, A Quantitative Approach</i> , Third Edition (2003) (“Hennessy & Patterson”)
2020	Declaration of David Anderson, Ph.D
2021	Binu K. Mathew et al., A Gaussian Probability Accelerator for SPHINX 3, (“Mathew I”)

I. Introduction

The Petition proposes that an ordinary speech recognition artisan would have been motivated to implement Jiang's speech recognition teachings in Chen's clustered processor and memory architecture with a reasonable expectation of success.

But neither Jiang nor Chen enables such a combination, so the Petition must prove enablement through evidence outside those references. The Petition and Mr. Schmandt, however, fail to make that showing. Indeed, Mr. Schmandt admitted under cross-examination that he has *never* built or designed the processor to memory architecture for any of the speech recognition systems he identifies in the background of his declaration. Mr. Schmandt further admitted he has never supervised anyone in the process of mapping speech recognition software to a hardware architecture like Chen's.

As Dr. Anderson explains in detail, the Petition's combination would have raised a number of complications and conflicts that the POSA would not have been qualified to address or resolve. Indeed, Jiang and Chen are inherently ill-suited for combination, since Jiang's technique requires extensive communication between computational components whereas Chen does not allow communication between some of its processors and memories.

Moreover, real-world evidence from contemporaneous references teaches that the combination would *not* be expected to speed up Jiang's recognition process, and that the POSA would not have been motivated by such an expectation. To the contrary, *Mathew I* teaches that a five-processor parallel processing system *slowed down* the speech recognition process compared to a two-processor system due to the associated synchronization overhead. Mr. Schmandt's other purported motivations—alleged cost benefits and “flexibility and scalability”—are likewise baseless, as Mr. Schmandt's deposition revealed. By contrast, Dr. Anderson explains in detail why the POSA would not have been motivated to combine Jiang with Chen in view of the known challenges and disadvantages of such a combination balanced against the low likelihood of benefits.

Finally, the Petition further fails because it provides no theory as to how the *combination* of Jiang and Chen would operate to meet limitations 1(d) and 1(e). As Mr. Schmandt admitted, his theory requires that Jiang *modified* to use Chen's hardware would practice both limitations, but his declaration does not even *mention* Chen with respect to limitations 1(d) and 1(e), much less explain *how* the combination of Jiang and Chen would meet them. And although Mr. Schmandt attempted to fill the void with a new, *ad hoc* theory presented for the first time at his deposition, the evidence demonstrates that theory would not have been enabled.

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.