

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TEXAS INSTRUMENTS INCORPORATED,
Petitioner

v.

PARKERVISION, INC.,
Patent Owner

Case IPR2024-00934
Patent 7,496,342 B2

**PETITIONER'S REPLY TO PATENT OWNER'S OPPOSITION TO
PETITIONER'S MOTION TO EXCLUDE**

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PO's Opposition to Petitioner's Motion to Exclude (Paper 41) should be denied for the following reasons.

I. Ricketts' Opinions Are Based on Flawed Methodologies

It appears that PO is conflating two issues. They confuse the question of whether DeMaw's circuit performs a plurality of charging and discharging to form a down-converted signal of claim 18 with whether DeMaw's circuit performs the discharge percentages of claims 19-21. To clarify, the simulations use a modulated periodic carrier as a test signal. And as Ricketts quite correctly points out, DeMaw's circuit repeatedly (e.g., periodically) performs charging and discharging of the capacitors, as required by claim 18. As expected, both experts' simulation results prove that DeMaw renders claim 18 unpatentable.

Ricketts's methodologies for selecting and analyzing the data to address the question of whether DeMaw's circuit performs the discharge percentages of claims 19-21, however, *is* flawed. Ricketts's methodology for selecting data for his analysis is based on the repetition of the low-frequency signal pattern; but by forgoing to perform a computational analysis on enough cycles and representing that data visually, Ricketts failed recognize that the underlying charging and discharging values do change. Opposition Brief at 2 (citing Ricketts characterizing the waveform as "not changing"), Ex. 1051, 61:8-20. The charging and discharging occurs due to the effects of the higher-frequency information signal

has on the charge on the capacitors. Such changes cannot be observed simply by looking at the low-resolution modulation cycles. Indeed, Ricketts's own data show that the capacitors' behavior *does change* and *is not repeating*.

t0	t1	Vcap1(t0)	Vcap2(t0)	Vcap1(t1)	Vcap2(t1)	percentage CAP1	percentage CAP2
First Four Data Points of Cycle 1							
1.000 0E-05	1.000 3E-05	10.62	12.876	11.682	12.723	9.9935	-1.1899 (discharge)
1.000 7E-05	1.001 0E-05	11.647	11.931	12.808	11.633	9.9649	-2.4994
1.001 3E-05	1.001 7E-05	12.803	10.773	13.218	11.165	3.2486	3.6425 (charge)
1.002 0E-05	1.002 3E-05	12.746	10.717	12.419	11.855	-2.5629	10.614
First Four Data Points of Cycle 2							
1.100 0E-05	1.100 3E-05	10.587	12.858	11.218	13.13	5.9556	2.1161 (charge)
1.100 7E-05	1.101 0E-05	10.942	12.591	12.172	12.254	11.239	-2.6732
1.101 3E-05	1.101 7E-05	12.222	11.36	13.135	11.286	7.4624	-0.65744 (discharge)
1.102 0E-05	1.102 3E-05	12.968	10.562	13.002	11.335	0.26185	7.3188

EX-2021 at 183 (Appendix B) (partial, annotated)

The issue here goes beyond the mere presentation of cherry-picked data. It goes to the fundamental approach that Dr. Ricketts took in selecting and considering the data. By only looking at the low-resolution periodicity of the carrier signal, he ignores the underlying data across the entire operation of the circuit that are central to the question of whether DeMaw performs the claimed discharge percentages.

Thus, Ricketts's conclusions are based on flawed methodologies and should be excluded.

II. Ricketts's Conclusions Rely on Insufficient Data

Even if it were true that Ricketts "reviewed and analyzed an extensive amount of data," Dr. Ricketts provides no results of that analysis. Put simply, there is nothing in the record to suggest that Ricketts's computationally analyzed more than 2 microseconds of data. At best, Ricketts testified that he "ran the simulator" so he "could see from the results well past the start-up period" that "the circuit was operating as it's intended." TI-1051, 61:8-20. This qualitative assessment of DeMaw's circuit shows that it performs a plurality of charging and discharging to produce a down-converted signal (as intended); but such a qualitative assessment is insufficient to conclude whether DeMaw's circuit performs the claimed discharge percentages. Essentially, Ricketts must prove a negative—that DeMaw's circuit *never* performs within the claimed discharge percentage ranges. But to show this, the Ricketts only provides computational results from 2 microseconds. As mentioned in TI's Motion to Exclude, that is insufficient data from which to draw that conclusion.

By contrast, Dr. Galton provided histograms for each variation of the DeMaw circuit, as well as histograms showing performance of DeMaw based on Ricketts's interpretations of the claims. The histogram data shows the discharge

percentages are the result of simulating the circuit for **hundreds** of microseconds and **tens-of-thousands** of cycles.

Note that Dr. Galton's circuit simulations cited in PO's Opposition at 5-6 go towards showing DeMaw's performance of a plurality of charging and discharging cycles of the two capacitors, and thus, do not benefit from the display of additional periods of the waveform. That is, the data displayed is sufficient to show performance of claim 18 by DeMaw. To clarify, TI is moving to exclude the data in the tables in Appendix B, as well as Ricketts's conclusions based on that data. TI is not moving to exclude the waveforms in Appendix B, particularly because they prove that DeMaw performs the method of claim 18.

III. The Prejudicial Effect of the Tabular Data in Appendix B Outweighs Their Probative Value

The tabular data in Ricketts's Appendix B is of minimal probative value. First, the sample set of the data is too small to accurately represent the circuit performance, much less that the circuit does not perform the claimed discharge ranges. Second, to show that DeMaw performs the claimed percentages, the data need only show **one occurrence** of a discharge percentage falling within the claimed ranges. Dr. Galton's histograms do just that by showing that the number of occurrences of discharge percentages across the entirety of the claimed ranges is non-zero. Ricketts's data tables showing some discharge percentages for only 2 microseconds do nothing to prove the negative—that DeMaw *never* performs

within the claimed discharge percentage ranges. Instead, PO presents them to push a biased narrative and sow confusion. Indeed, that Ricketts only provided 2 cycles-worth of data is highly suspect, particularly when compared to Dr. Galton's data representing over 50,000 cycles.

PO argues that "including an unwieldy amount of additional data that covers a signal that is repeating itself makes no sense and would be more confusing, misleading, and inefficient." Opposition at 8. First, the results of a large data set can be represented graphically, such as by the histograms that Dr. Galton provided. Again, each of Dr. Galton's histograms represent thousands of cycles of data. And second, PO erroneously points to the periodic carrier signal pattern as the reason for why additional data is unnecessary, and in-so-doing, ignores the fact that the fine-granularity data changes within a cycle and across multiple cycles.

IV. Conclusion

For the foregoing reasons, TI's Motion to Exclude should be granted.

Respectfully submitted,

Dated August 19, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(1) and 42.6(e)(4)(iii), the undersigned certifies that on August 19, 2025, a complete and entire copy of this Petitioner's Reply to Patent Owner's Opposition to Petitioner's Motion to Exclude was provided by email to the Patent Owner by serving the email correspondence address of record as follows:

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