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Phone: +1 646 783 7100 | Fax: +1 646 783 7161 | customerservice@law360.com

Intel Owes VLSI Another \$3B For Chip IP, Economist Tells Jury

By **Cara Salvatore**

Law360 (April 14, 2021, 8:36 PM EDT) -- Intel owes \$3 billion for allegedly infringing two chip-technology patents, an economics consultant for VLSI told a Texas federal jury Wednesday as the patent holder seeks what would be a record verdict dwarfing its recent \$2 billion win against the tech giant.

In this second of three trials in a multipatent case, VLSI has argued Intel used patented ideas regarding on-chip integrated voltage regulation, invented around the year 2000 — U.S. Patent No. 6,633,187, which covers "waking up" chip cores quickly from power-saving idle states, and U.S. Patent No. 6,366,522, which covers regulating power draw while the cores are awake.

Expert witness Ryan Sullivan of Intensity LLC revealed Wednesday that VLSI believes Intel owes reasonable royalties of \$2.11 billion for infringement of the '187 patent and \$984 million for infringement of the '522 patent, a total of just over \$3.09 billion.

Sullivan's recommendations were born of a regression analysis intended to "isolate the price benefits, the revenue benefits, and the profit benefits" Intel allegedly earned purely from the higher clock speeds and better performance provided by the two technologies, Sullivan said.

He made a model that matched Intel's confidential sales data with product feature data, and then assigned a coefficient to each of about 150 factors. The coefficient "reflects the relationship between price and that factor," Sullivan said.

Wrapping up the two patents into a single factor, clock speed, Sullivan found the coefficient for clock speed was 0.764: For every 1% improvement in a chip's clock speed, the price increase attributable to it was 0.764%.

That finding "is highly relevant and statistically reliable," Sullivan said.

Though the damages period in the case is only 2019 to 2020, Sullivan used sales data from 2012 to 2019 to get the most accurate picture of the dollar value of the features, he said.

Multiplying the chip-performance boosts that earlier expert witnesses found from the patented technologies — which were in the 2 to 5 percent range — by certain Intel revenue points, Sullivan found that Intel earned over \$4 billion solely because of the patented technologies.

He then reduced that number to account for the relative contributions of the parties to the money earned. The people who came up with the technology were responsible for roughly 21% of the revenue, Sullivan said, and Intel bore the remainder of the responsibility because it commercialized it.

That left the final numbers: a \$1,545,709,611 reasonable royalty for the power savings of the '187 patent; a \$563,512,533 royalty for the performance benefit of the '187 patent; and a \$984,084,853 royalty for the benefits of the '522 patent, according to Sullivan.

That equates to just a few dollars per computing core, he said.

On cross-examination, Intel made the case that in the three times the patents have previously changed hands, they've never been valued at more than a sliver of the number VLSI put in front of the jury. Invented at SigmaTel, the patents were sold with that company to Freescale Semiconductor around 2008, and all of

of WilmerHale said.

The complex patent damages consideration known as the Georgia-Pacific factors requires the jury to look at the real-world value of the patents, Lee said.

"Real-world information would include the prices at which these patents have been bought and sold before, wouldn't it?" Lee asked Sullivan.

"That can be," Sullivan answered.

Shortly after, U.S. District Judge Alan Albright closed the proceedings to the public for half an hour to discuss confidential information of VLSI's.

On redirect, VLSI lawyer Amy Proctor hinted that the discussion had to do with the financial arrangement between VLSI and Dutch chip conglomerate NXP, the company from which VLSI obtained the patents a few years ago, leading toward the conclusion that their "real-world value" was, in fact, higher than had been suggested.

"Is there an expectation that additional money will change hands between NXP and VLSI?" Proctor asked Sullivan.

"Yes," he said. "Any royalties that are received by VLSI, a large chunk of that goes to NXP. So that's why it's a cooperation agreement. So the up-front payment was just a partial or an initial payment to, in effect, get the licensing program under way."

And further, Sullivan insisted, the earlier company acquisitions were done by people who didn't understand the real value of the patents because they didn't have Intel's secret data and secret testing tools to understand how much benefit Intel derived from the technologies.

"Is it fair to say we in this room today, those who have not been excluded [during sealed portions of the trial], actually know more today than NXP does at this same moment?" Proctor asked. Sullivan said yes.

After Sullivan left the stand, VLSI rested its case, and Intel began its case with two employees who gave an overview of the company's operations and then discussed how the chip giant developed and implemented on-chip voltage regulation internally, with testimony that no one in the company knew of the patents.

That testimony was not as relevant as it could have been earlier in the case, however, because after VLSI rested its case, Judge Albright granted Intel judgment as a matter of law as to willfulness.

Intel started delving heavily into integrated-circuit chips around 2008, VLSI lawyer Morgan Chu of Irell & Manella LLP told the jury in **Monday's opening arguments**.

The current trial is the second of three planned trials in the case. The jury in the first trial delivered one of the largest patent infringement wins in history to VLSI, awarding nearly \$2.18 billion on two other patents.

The patents-in-suit are U.S. Patent Nos. 6,366,522 and 6,633,187.

VLSI is represented by Morgan Chu, Ben Hattenbach, Alan Heinrich, Christopher Abernethy, Ian Washburn, Elizabeth Tuan, Adina Stohl, Amy Proctor, Dominik Slusarczyk, Charlotte Wen, Brian Weissenberg, Benjamin Manzin-Monnin, Jordan Nafekh and Babak Redjaian of Irell & Manella LLP, Craig Cherry of Haley & Olson PC and Andy Tindel, J. Mark Mann and G. Blake Thompson of Mann Tindel Thompson.

Intel is represented by William Lee, Louis Tompros, Kate Saxton, Gregory Lantier and Amanda Major of WilmerHale, J. Stephen Ravel and Kelly Ransom of Kelly Hart & Hallman LLC and James Wren of Baylor Law School.

The case is VLSI Technology LLC v. Intel Corp., case number 6:19-cv-00255, in the U.S. District Court for the Western District of Texas.

--Editing by Orlando Lorenzo.