

# The late-night email to Tim Cook that set the Apple Watch saga in motion

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At about 1 a.m. California time in 2013, a scientist emailed Apple Inc. Chief Executive Officer Tim Cook with an irresistible pitch.

"I strongly believe that we can develop the new wave of technology that will make Apple the No. 1 brand in the medical, fitness and wellness market," he wrote in the email, which was later included in legal documents. Some 10 hours after the message was sent, an Apple recruiter was in touch. And just weeks after that, the engineer was working at the tech company on a smartwatch with health sensors.

A flurry of activity began. Within a few months at Apple, the employee asked the company to file about a dozen patents related to sensors and algorithms for determining a person's blood-oxygen level from a wearable device. But this wasn't just any engineer. He had been the chief technical officer of Cercacor Laboratories Inc., the sister company of Masimo Corp., which went on to get to the US to ban the Apple Watch.

Apple's decision to hire this technical whiz—a Stanford engineering Ph.D. named Marcelo Lamago—is seen as the spark that sent Masimo's lawyers after Apple. While the iPhone maker denies it did anything wrong, Masimo cited the poaching of employees as part of claims that the iPhone maker infringed its patents. The dispute culminated this month in Apple having to pull its latest watches from the company's US stores, hobbling a business that generates roughly \$17 billion in annual sales.

Masimo, a relatively obscure maker of medical devices based in Irvine, California, argues that Lamago seized its prized asset—the ability to noninvasively and accurately capture the level of oxygen in a person's blood—and took it to Apple. The feature ultimately helped turn the watch into more of a health device, solidifying its status as the wearable industry's best-selling product.

Lamago joined Masimo in 2003 as a research scientist before becoming Cercacor's tech chief around 2006. Cercacor was a spinoff of Masimo, and both companies are run by CEO Joe Kiani, who helped invent much

of their core technology.

Lawyers for Masimo say that Lamego lacked prior knowledge about how to develop the blood-oxygen feature (his previous studies were about neural interfaces rather than health sensors). He learned how to build the technology at Kiani's companies and delivered it to Apple, they say.

Lamego then resigned from Apple in July 2014, just months after joining. Masimo argues that he left after Apple got what it needed. The reality, according to longtime Apple executive Steve Hotelling, is that Lamego didn't fit in at the company. He clashed with managers, demanded multimillion-dollar budgets and wanted the ability to hire his own engineers without approval, Hotelling said in a deposition that was part of a court fight between the companies. After weeks of discussions, Lamego left Apple.

The first Apple Watch was announced three months later, in September 2014. It didn't have the blood-oxygen sensor and instead relied on more basic technologies, such as a pulse reader.

Apple first approached Lamego to join about a year before his email to Cook. The overture happened around the time executives from Apple and Masimo met in 2013, a moment that has become another focal point in the dispute between the two companies. Lamego declined to join Apple at the time, but his tune changed after Kiani refused to make him the CTO of Masimo as well, lawyers for the medical company argue.

When Apple met with Masimo, it was seeking technology and talent that could bolster its work on the watch. At the time, Masimo believed Apple was interested in doing a deal. The company alleged in a 2020 lawsuit that Apple used the meeting to instead learn about its technology and lay the groundwork for hiring its people. In addition to enlisting Lamego, Apple hired Masimo's former chief medical officer and about 20 other

staffers, the medical device company said. Masimo failed to convince a jury of its claims this year.

While the Lamego email was a key piece of evidence for Masimo's lawyers, the effort didn't make much headway with the judge after a senior Apple engineer testified that development of the blood-oxygen feature started in late 2014—after Lamego had already left. Further, the judge threw out parts of the case relating to Apple's practice of hiring Masimo employees, saying that "recruiting or hiring employees from another company, including from a competitor, does not on its own constitute improper means." The judge also dismissed the idea that Apple stole trade secrets, and a jury sided with Apple 6-to-1.

After his stint at Apple, Lamego ended up starting his own company, True Wearables. In 2016, he released a device called the Oxxiom, which he called the world's first continuous and disposable blood-oxygen sensor. Masimo sued the startup and won a court order blocking it from selling the product. Lamego didn't respond to requests for comment.

When Masimo filed its initial lawsuit, Apple hadn't yet brought a blood-oxygen sensor to market. But eight months later, the Apple Watch Series 6 was introduced with the feature—known in the industry as pulse oximetry—as its key new addition. That led Masimo to file a separate complaint with the US International Trade Commission in 2021 alleging that the feature infringed its patents.

The ITC concurred in October and ordered Apple to remove infringing models from the US, including the current Series 9 and Ultra 2. That prohibition took effect this week after the White House declined to intervene. Apple said it strongly disagrees with the ITC decision and is "taking all measures to return Apple Watch Series 9 and Apple Watch Ultra 2 to customers in the US as soon as possible." A representative for Masimo declined to comment.

Blood oxygen is frequently called the fifth vital sign. A proper level of oxygen saturation—the percentage of oxygen floating in one's bloodstream compared with the maximum it could be—is a requirement for functions like breathing, moving and thinking. It has long been one of the first diagnostics when a patient arrives at a hospital or doctor's office. And the measurement became key at the height of the COVID pandemic, when doctors said that a reading under 95% could suggest a person is struggling to breathe due to the virus.

Apple argues that Masimo sued it to clear the field for its own consumer-focused wearables. Masimo recently released the W1, a square smartwatch with an array of health sensors. And it's planning to soon release the Freedom watch, which has more health capabilities and a round, more modern-looking design. In an attempt to reach more consumers, it acquired Sound United, owner of speaker maker Bowers & Wilkins, for more than \$1 billion last year.

Apple countersued Masimo in 2022, saying that the W1 took the design of the Apple Watch. "Masimo copied from Apple Watch and is freeriding on Apple's hard work," the company said.

In a Bloomberg interview earlier this month, Kiani said that Apple should have done things differently.

"They didn't have to steal our people—we could have worked with them," he said. "These guys have been caught with their hands in the cookie jar, and—instead of being embarrassed and doing the right thing—they're blaming everybody and fighting everybody."

Kiani said that Apple executives once called him the "Steve Jobs of health care."

"Maybe it's time they think different," he said.

Masimo is a fixture in hospitals. Its equipment for tracking blood oxygen, blood management and other measures is used on more than 200 million patients a year, the company says.

But part of its revenue over the past two decades has stemmed from lawsuits against medical device competitors, including Royal Philips NV, that turned into settlements or licensing agreements.

Kiani immigrated from Iran when he was 9 and started Masimo in 1989, five years after the original Mac went on sale. While his company now has thousands of workers globally, a market valuation of \$6 billion and annual revenue of about \$2 billion, Kiani says Masimo started as an underdog just like Apple. He says he took out a second mortgage in his 20s to fund development of the startup in his garage. Though there was already medical gear to monitor blood oxygen, Kiani's breakthrough was tracking it during movement or on people with weak pulses—key features for mass-market wearable devices.

He's also friends with President Joe Biden, one person who could have stopped the Apple Watch sales ban. The White House has the ability to veto import bans to the US, a power it has rarely used. One case came in 2013 when President Barack Obama overturned an iPhone ban spurred by a patent dispute with Samsung Electronics Co. But that was an easier move politically: It involved picking a homegrown American company over a South Korean competitor. The headquarters of Apple and Masimo are both in California.

Masimo's goal, people close to the matter say, was for the ITC to impose its ban in the summer. That would have probably led Apple to delay the release of its new models, which are typically unveiled in September, and wiped out the holiday season. Instead, the ban only affected about a week of sales in Apple's December quarter. It also only applies to Apple's own stores; outside retailers like Best Buy Co. can still sell the

watches—at least until their inventory runs out.

And Apple believes it's well on its way to a fix. The company had engineers race to change the software algorithms and presentation of its blood-oxygen app to sidestep Kiani's claims. It's now up to the US customs agency to determine if those tweaks are sufficient to allow the smartwatches back on the market. A decision is expected on Jan. 12.

The [company](#) is also trying to get the ITC's order overturned by the US Court of Appeals for the Federal Circuit. For his part, Kiani doesn't believe a software fix will resolve a dispute that involves hardware patents. "I don't think that could work," he said.

In any case, Kiani and Masimo have gone further than anyone before them. Many companies have made arguments that Apple has stolen their technology and poached staff, putting them out of business or sending them into bankruptcy. But they've rarely gotten much traction.

A further mark of success for Kiani would be a settlement, which would bring a payday but also vindication. Masimo's website touts all the companies that license its technology and adding Apple to that list would be a triumph. It also would give Masimo marketing muscle for promoting its own products. Apple says it has held mediation talks with Masimo and that it expects to hold more.

In its earlier suit, which ended with a deadlocked jury, Masimo wanted Apple to pay more than \$3 billion in damages. Kiani isn't saying how much money it would take to reach a licensing agreement now. But he does plan to insist on one concession: "There needs to be an apology."

If that doesn't happen, the two companies are scheduled to return to court—again over patents—in late October.

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