In Memory of Engineers

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October was a bad month for the technology world -- we lost a number of incredible thinkers, engineers, and innovators. In order to honor the effect these people have had on our lives, I've been trying to dissect exactly how we remember their accomplishments. They're not necessarily famous or news-worthy people, generally, preferring their computer monitors to flashing paparazzi lights. And despite the enormous impact they have on how we currently live, they're forgotten for any number of reasons. In the simplest terms, I think it's because we've moved past their innovation, or we don't understand it.

I hate to make comparisons between people who have died, but it's inevitable when discussing this topic. Steve Jobs, the former CEO of Apple, was eulogized to an incredible degree in the days following his death. People all over the world loved his products, which I understand -- he was an innovator and a forward-thinking man, plus an indelible marketer to boot. Many peg him as one of the best CEOs in recent history, and I think time will prove that assertion to be true. But he wasn't an engineer, not in the truest sense, and not like Apple's often-forgotten co-founder Steve Wozniak. I have serious doubts that jobs interacted with Apple's products on an in-depth, or engineering-based level, but rather took on the role of our nations president: He had veto power but didn't write the bills himself.

Moved Past

I'll start by saying that I'm using the term "moved past" lightly. But when Edgar Villchur died on October 17, he left with little fanfare. He was an audio engineer who served in World War II and rose to the rank of Captain by repairing radios and radar systems. When he was finished with his tour, he applied for a teaching job with New York University -- despite not having any advanced degree in audio engineering or acoustics -- and taught a class titled "Reproduction of Sound" for a number of years.

It wasn't until the '50s, however, that Villchur started to make significant progress in

the audio world. He realized that loudspeakers were incapable of reproducing sound without distortion in the same way that amplifiers were, and developed a novel system for solving that issue. He applied for a patent based on his plywood prototype and took it to the market, where it was summarily rejected. A few years later, he and one of his former students decided that if no one believed Villchur's idea was possible, they would go into business themselves, and formed Acoustic Research, Inc. That company produced a portfolio of products that were recognized as the finest of their time.

After a long stay with Acoustic Research, Villchur developed circuits for hearing aids that used "wide dynamic range compression," which allowed them to amplify quieter sounds without over-amplifying louder ones. Instead of patenting this innovation, Villchur decided to publish the new system and allow anyone to use it as they saw fit. Today, that system is the standard on which all hearing aids are built. They, like loudspeakers, have been the focus of continued innovation, but only on a foundation Villchur built.

But that doesn't mean a whole lot to the general public. The obituary we ran on Manufacturing.net *[1]* received a few comments from audio engineers and others who were familiar with the man's work, but I think in general, the loudspeaker has become one of the items in our world that we now simply take for granted. It's been around long enough that the memory of its inception, or popularization, has been wiped away. That market has changed considerably since Villchur's time at Acoustic Research, and other manufacturers have filled the hi-fi audio market.

It's unfortunate, I think, because when you think about the parallels between Villchur's creations in his field, it has roughly the same scope as any of Apple's. Villchur's loudspeakers and the iPhone are both just one vertical in a dense market, but it just so happens that smartphones are all the hype today. As a society, we've simply moved on.

Don't Understand

Dennis Richie was found dead on October 12, 2011. He was a computer scientist who developed the programming language C, and it's hard to overstate the enormity of that achievement alone. The software running on your computer right now would not exist in its current state if not for Richie's accomplishments. Same goes for your smartphone -- and it's not an Android vs. Apple thing. Richie was also one of the major developers of UNIX, the operating system that runs on countless devices today and spawned a number of enormously popular -- and not-so-popular -- branches: Mac OS X, Android, Linux, Free/Net/OpenBSD, Solaris, and more. Yes, that's Apple's OS X, which was built on top of NEXTSTEP/OPENSTEP, which, in turn, was built on BSD. A majority of backend servers, which make the Internet and our favorite web applications possible, run on one of the aforementioned platforms, Linux in particular.

Still following?

Richie, too, did not receive nearly as much attention upon his death, and I think that

is an example of the "too complicated, don't understand" mentality. Hundreds of years ago, innovators were working at a level far below engineers today, which meant that their work was more easily understood by not only their engineering colleagues, but also the general public. Most people could understand the telephone or the lightbulb because they worked right in front of their eyes. They were relatively simple machines, so one could follow the steps and see how they worked. Learning to program C, on the other hand, is certainly not a matter of connect-the-dots. Believe me. I've tried. Our contemporary world is also riddled with too much nonsense in any given number of forms that it's hard for people to take a moment and reflect on the backend that makes everything they use possible.

I write this knowing there's nothing that really can be done. We can't help the fact that our technology moves at such a rapid pace, or that much of it is far too complex for the layman to understand. A lot of innovative people are going to get left behind, especially as technology continues to grow at a more rapid pace every day. There was a small but fervent effort [2] from a group of technology enthusiasts to have October 30 declared as "Dennis Richie Day" in California, where he lived and worked. The group began campaigning in response to the current governor, Edmund Brown, declaring that October 16 would henceforth be "Steve Jobs Day." Their rationale was that Richie, on a deeper level, had more of an impact on modern-day computing than anything out of Cupertino. He was a remarkable innovator, and deserved to be honored accordingly.

It's doubtful that Richie would have ever desired such an honor in his memory, and now that he's gone, it doesn't matter anyway. What I saw in the "Dennis Richie Day" movement was a group of people hoping not to spite the memory of Steve Jobs, but to hold fast to a dying ideal that it's not just CEOs and marketing firms that make the world move forward. It's not just about "Think different." Villchur and Richie were both men who did exactly that, and more. All I hope is that in the future, we can continue to give these people the respect they deserve, even if we don't completely understand it, or if their innovations have become partially-obscured by the march of innovation.

Thinking only goes so far. Villchur and Richie also spent their lives trying to "Build different," and that deserves our respect.

What are your thoughts? Think that Jobs' influence outweighed that of Villchur and Richie, or were you in support of "Dennis Richie Day"? E-mail me at joel.hans@advantagemedia.com *[3] or comment below.*

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