This software titan proposes a computer museum to mark Philly's role in starting the digital world

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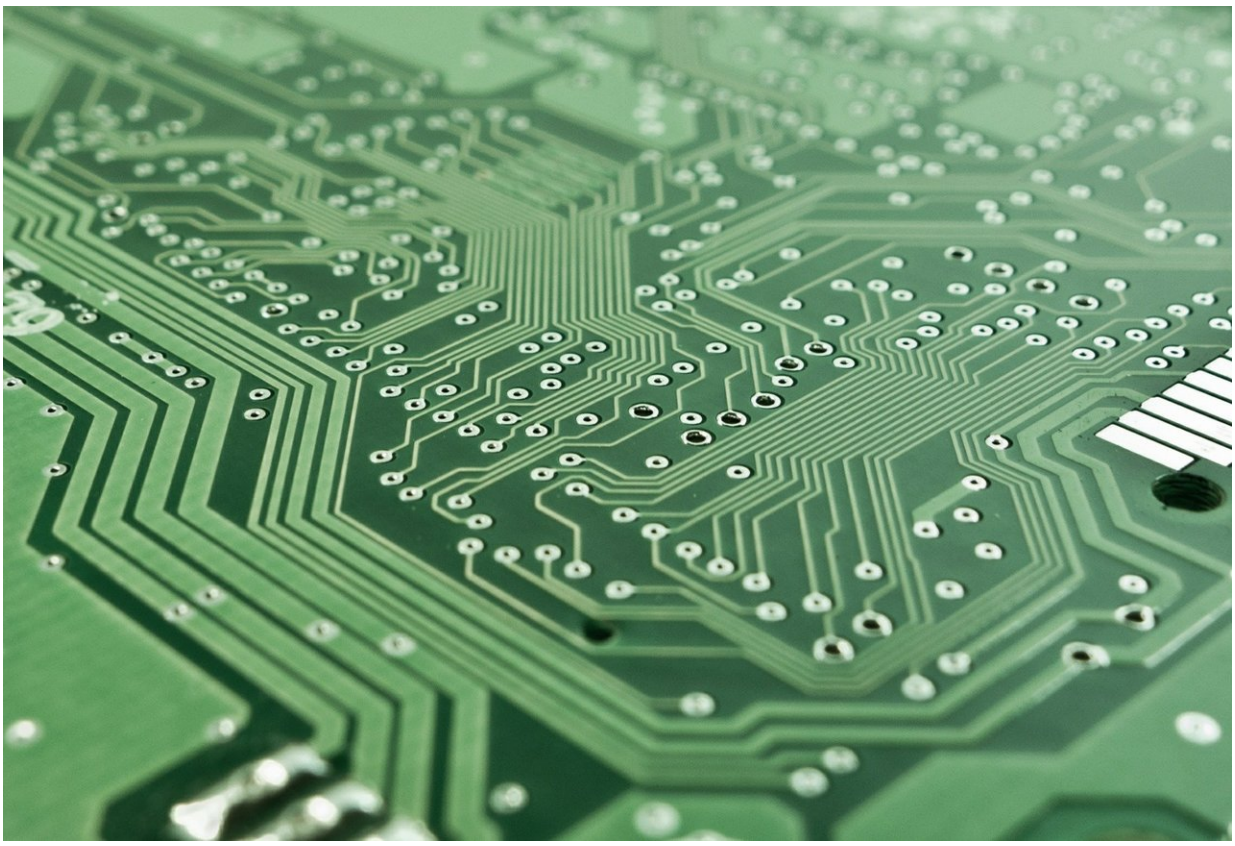

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Computers didn't start in Silicon Valley. They started here," in Philadelphia, says Jim Scherrer.

The sales-software mogul has been a fan of vintage computing equipment since, as a late 1970s Penn grad student, he wandered into the "cages and boxes and blackness" in the basement of Penn's engineering school, to find relics of ENIAC, the pioneer electronic computer that helped usher in the digital era.

Now he wants to set up a computer museum—a Compuseum—and provoke a next wave of innovation.

He poured forth this vision at a beer-laden table in the Franklin Institute locomotive room, with his friend John Gruber, who writes the Daring Fireball blog and podcasts for Apple fanboys.

This was at the pre-party—hosted by another Scherrer admirer, Chris Fralic of FirstRound Capital—for the Philly premiere of General Magic, the joyful, nerdly film about the Apple Computer refugees who designed the first smart phones and apps in the early 1990s but couldn't plug them into the public internet because there wasn't one.

General Magic was a spectacular case of before-their-time in Silicon Valley. Scherrer says Philly tech can relate.

The name of the nation's premier computer industry center, Silicon Valley, recalls the raw material used by California transistor-makers who supplied integrated-circuit materials for 1970s computers.

Philadelphia radio factories had supplied earlier computer pioneers with vacuum tubes—first factory-made at RCA Victor in Camden, clipped by the millions into Philco and Atwater Kent radios, and adapted as binary switches for innovative computing machines like ENIAC, powered by 17,000 off-the-shelf tubes.

So Philly should really be known as "Vacuum Tube Valley," Scherrer

adds: "We want to trademark that." He acknowledged the tubes were prone to moths—the original computer bugs."

His bow tie and checked jacket recalls Scherrer's long-ago stint as a Chestnut Hill Academy science teacher and as a Penn graduate engineering student, finding computer artifacts "in cages and boxes and blackness in the basement of the Moore School," with tech's usual lack of reverence for sacred objects once unplugged.

I asked the General Magic filmmakers: How do towns like Philly and companies like General Magic lose their early leads? Why do some companies and some regions benefit the most from innovation?

Sometimes it comes down to who's got the best bosses, codirector Sarah Kerruish told me. "Visionary CEOs who have a good sense of market timing and who can execute on delivering products are actually rare." Apple's Steve Jobs "had to go into exile to develop the skills" he would need as the iPhone CEO.

And sometimes it's cultural—about sharing, vs. selfishness, said General Magic executive producer Mike Stern. It's not just the presence of investors, excellent tech universities, and rich military and NASA contracts—Philadelphia, Boston, and other cities had those, too—but also California's "unique legal and business culture," he told me.

Specifically, California and its courts refused to enforce employee non-compete agreements. With creators and engineers free to quit, seek better deals and more brilliant partners, California capitalists learned to collaborate, since today's competitor could be tomorrow's investor or user. That's better than trying to shut one another down, as the litigious minicomputer-makers that once lined U.S. Route 128 outside Boston did, dooming their industry as California PC-makers passed them by.

Could Philly have kept its early lead and dominated computing?

There were so many promising starts. Philly radio-makers dominated the market but didn't innovate and were wiped out by cheap transistor-based competition.

The builders of ENIAC, chased off campus by Penn in a patent fight, went on to start what's now Blue Bell-based Unisys, which has distantly trailed IBM through the hardware, software, and services eras.

Sungard, based in Wayne, dominated business backup computing, but its private-equity owners failed to finance its jump to the cloud. Commodore Computer of West Chester briefly rivaled early Apple as a pioneer maker of cheap PCs but failed to deliver enduring products. AT&T spin-off Bell Atlantic was based in Center City in its innovative early phase but soon decamped for New York.

"It's the roll of the dice," affirmed Gruber. "Maybe, if a butterfly in China flapped its wings," Philly would have rolled over Palo Alto. Or Austin might have led, if Texas Instruments hadn't been content to reissue the same high-margin calculators. Or Chicago, if Motorola had been willing to see past its popular Razr line.

Early computing teaches useful lessons, says Gruber, who "never owned a computer till I went to college, at Drexel, in 1991," and was born after vacuum tubes were obsolete.

"To really understand, you have to know how it works," he said. "My generation had such a leg up, evolving with this knowledge, as the computer gained complexity. There is so much young people can learn when they see how this evolved, about how people dealt with enormous technical constraints." That's how the building-size mainframes of old evolved into handheld internet phones with more computing power than

NASA used to plant men on the moon.

Even before ENIAC, "this was the crucible of the Computer Age," Scherrer affirmed. The Baldwin Locomotive Co. and the Comptometer adding-machine company laid groundwork, arranging women "computers" at desks arranged "in rows and columns, just like a human Excel spread sheet. We stand on the shoulders of giants."

To be sure, there's already a Computer Museum in Silicon Valley. The Smithsonian Institution has big technology collections of its own. "Like most museums, they have 98% of their stuff in storage," Scherrer says, a bit dismissively.

His group—there is no formal committee—is still strategizing. Meanwhile, "people are donating objects," said Scherrer. A recent acquisition: "a ten-megabyte hard drive from 1960. It weighs 80 pounds. It sold for $6,000. Made by IBM and Western Digital." Gruber marvels, noting he just spent $245 on a grocery-bag-size Samsung SSD that holds two terabytes—two million megabytes.

The Compuseum collection-in-formation is currently distributed in the attics and basements of fans' homes. Scherrer dreams of a display, and a place for classes and training and networking, and "a space where new products can be released." Maybe next to Drexel, in the new Schuylkill Yards, a few blocks from the University City Science Center building at 3675 Market St., where Scherrer says his friends have lately been displaying an assembly of pre-ENIAC mechanical calculators.

Among the donors, he says, is Alfred Poor, former contributing editor of PC Magazine, who donated a copy of every issue after it ceased printing. Worth saving, and looking back on how it all happened, says Scherrer.