

Integrating Business and IT

An Interview with Tom Campbell

Former Silicon Valley Congressman and current Haas Business School (UC-Berkeley) Dean Tom Campbell spoke with NOW Magazine recently on the **INTERLINKED ROLES** of education and technology.



Tom
Campbell

On Tech Issues Then and Now

NOW Magazine: You were known as a tech-savvy member of the U.S. Congress during your two stints from 1989 to 1993, and from 1995 to 2001. How did the major issues concerning Silicon Valley change over that period of time?

Tom Campbell: When I first went into Congress, DRAM (dynamic random-access memory) chip dumping from Japan was a very big issue. Now, the market has changed. The U.S. still makes logic circuits, but not the memory anymore.

NOW: It seemed that suddenly that business just went offshore because there was a low end of the market, and it was simply more economic to produce them in Taiwan, Malaysia, Korea, and other places. So Silicon Valley had to go upstream.

Campbell: Exactly right. And this applies to the software industry as well. When I first represented Silicon Valley in Congress there were a substantial number of engineers available. Now we're in a desperate shortage, and so the industry is focusing a lot on H1B visas, and permanent green cards.

NOW: You're saying that "well, now there's this need for the big influx of the talent to come here because the software industry has gone so upstream?"

Campbell: I think that's part of it, but I think the other part relates to the growth of the Internet and World Wide Web. The growth of the back-end of the Internet, including all the ISPs, has had a major effect on our demand for engineers and software writers in particular. There's a need for a major influx of engineers because America is not producing them.

But we no longer hear—and probably won't hear—demands for protection from dumping as we've moved more towards a seamless international economy—which is not perfectly seamless yet, of course.

On Educating Business Students

NOW: So now you're with UC-Berkeley and the Haas School of Business, so you're to some extent responsible for trying to educate the leaders of the future. Whether they go into the technology industry or not, one would guess that they need to be aware of basic technological issues. How do you integrate technology into the curriculum?

Campbell: We allow the students to opt into a program called management of technology within the engineering school and the business school. A student getting an MBA can choose—and many, many do—to take a certificate called management of technology, and she or he then must take a certain minimum number of courses in the engineering



school. Similarly, a EE student who is getting a Masters in Science can get a certificate in management of technology that will make him or her more attractive to a prospective employer.

On Intellectual Property

NOW: You earned both a law degree and a PhD in economics during your time as a student. Even though the fundamentals of these disciplines are probably more or less the same today, we've seen major new issues emerge in both fields. One example would be the emergence of intellectual property as both a legal issue and one that can affect whole economies

Campbell: Yes, there is a very apt question. I like to say that "it's gone all the way out, and come back."

When I was in law school we studied copyright, patent, trademark, and international trade, of course. But the international trade laws were there to allow an American patent, copyright, trademark holder to sue to keep out the product of a foreign manufacturer that violated your IP.

A violation would occur overseas and the product that violated your copyright, patent, or trademark would be shipped to a third country. So it wouldn't do you much good to go sue them in an American court to keep their good out of the United States; they weren't selling it in the United States. The system of laws that I studied were directed towards a world where foreign producers were competing for the American market, and the remedies were related to that.

But today the remedies relate to the third countries; you have far less effect through an American court decree. We've seen the rise of international organizations and agreements that will consider your patent valid in another country, so you can come in and enforce your patent overseas.

I know I'm about to give you a generalization, but it has increasingly been the case to be very hard to enforce your patent, trademark, or copyright overseas. You have to prove it, the courts are not exactly the same as the ones we're familiar with, with access to discovery. And some courts are not completely square, so you

might have the authority on paper but not in practice.

So this is what I mean by "it's gone all the way out and come back." What we've come back to, at least in trend if not in final resolution is a world where IP becomes less important. Just being ahead of the market becomes important.

NOW: So you just have to try to get a competitive advantage and make hay while the sun shines.

Campbell: Right, exactly. You know you're going to be ripped off, and you know it's a matter of time, and you hope to make a profit during the time before you get ripped off and get commoditized. Because as with DRAM originally, you'll be commoditized.

NOW: So what's the incentive for countries to sort of get with the program, to have a better, more consistent intellectual property landscape?

Campbell: I think the answer is access to the technology at a higher level, which means higher quality jobs. Though China

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can forever win the battle of low labor cost, but if China wants to win the battle of high end jobs for designers...

NOW: They're going to have to get with the program more...

Campbell: They're going to have to absolutely, because the firms that do that won't place their laboratories over in China.

NOW: That seems to put even more pressure on Silicon Valley to make people keep moving up to the high end and be really, really creative.

Campbell: I agree with you, that's what the pressure is in the Valley. We don't have wafer fabrication plants anymore, we are increasingly devoting our resources to the products of our mind where we have a comparative advantage.

On Globalization

NOW: Let's talk about globalization a little bit. What do students studying economics today need to know that they didn't need to know when you were first studying it?

Campbell: For starters, bilateral trade is almost irrelevant. When I was first studying economics there was a lot of focus on bilateral trade deficits. But it doesn't matter as much as we thought it did. You can be in deep deficit with one country and deep surplus with another and be okay.

Second, we no longer have the universal acceptance of the dollar as the sole international currency, we now have the Euro. Now companies and even individuals can and do trade in Euros.

The most important impact of that is the inability of the United States to continue to expect foreign investors to fund our deficit. They can safely place their

surpluses in Euro denominated financial instruments, bonds for instance, without giving us a free loan or a reduced rate loan.

That's the huge change. So the US no longer is the sole currency, and bilateralism is therefore far less important than the sum of all of your trade relationships.

NOW: So now with all these issues relating to this sort-of-globalized economy, it does seem like there needs to be some sort of ongoing process to get all the nations of the world and create just a lot of basic principles in business. Some sort of harmonization...

Campbell: Yes, I think you're right. I was in Congress when the decision was made to allow China to come into the WTO. And that debate truly focused on precisely what you said, because China was not yet prepared to harmonize, but made serious promises and pledges to do so as a condition of WTO entry. A lot of this debate concerned the country's reputation as a major intellectual property (IP) violator.

Taiwan by contrast was ready and had a record of compliance that showed they had cleaned up their IP act a lot, but it was politically difficult to admit Taiwan without admitting China. I think the Congress made the right decision. The WTO had already voted to let China in, and that was to say "let's move towards harmonization." The days where we would try to exclude an economy as large as China were past, and that's where we are now.

NOW: Most recently, India has been growing in the technology business as we all know. How will continued technology growth in India challenge you as an educator, and

challenge students, and challenge business leaders?

Campbell: Well, the students have seen this coming, and this is fascinating. At UC-Berkeley and the Haas School of Business, we hold an Asia Business Conference every year that is originated and run by students. It has focused as much on India as on China.

As to India's long term, we've seen from this conference that its future will remain clearly in software, because you are able to upload it and it therefore gets transferred without the government ever having to deal with it. I think it's a fair comment to say that India's government lags behind the country's competitiveness in its industries. So what better industry than one with products that can be electronically uploaded and exported and downloaded in a millisecond?

NOW: How does this affect the U.S. then?

Campbell: There is clearly a division of labor right now, with code writing increasingly going to India, but high-end design staying in America. It's the software analog to the printed circuit board being made in Malaysia but being designed in Sunnyvale.

NOW: You don't see this as a zero sum game where benefit to India must mean detriment to the U.S.?

Campbell: Oh no, no, not at all. Clearly the U.S. and global usage of the Internet, and the usage of IP embedded into smart consumer goods have both barely scratched the surface of their potential. So as the code writers in India assist the designers in the United States, the market will expand for both, I'm optimistic about that.



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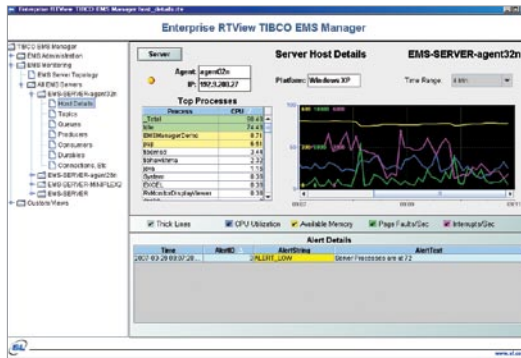


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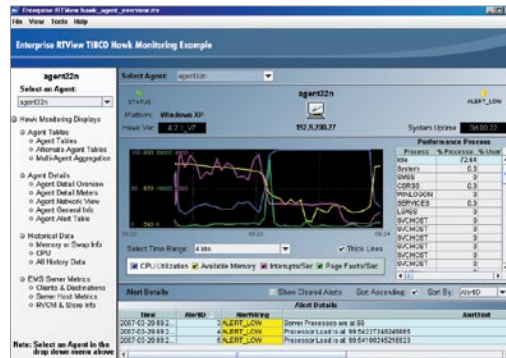
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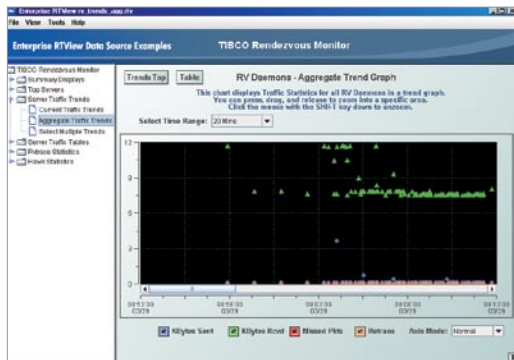
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