

Remarks by Henry R. Nothhaft
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“The Bulls Eye of Prosperity”

Thank you for that kind introduction, Judge Michel. And thank you, everyone, for coming here today.

Today I'd like to offer a personal testimony to the importance of patents in job creation. Because I've been a high-tech serial entrepreneur and CEO for more than 35 years. And in that time, I've had the privilege of participating in some of the most important technology undertakings of the postwar era.

I helped grow the first commercial Internet company—Telenet—in the 1970s, helped develop the first email, voice mail and voice-data networks in the 1980s, and in the 1990s, built one of the first successful nationwide Internet service providers-Concentric Network.

Then, in the early 2000s, I was CEO of a company called Danger that developed the first massively-popular smart phone with instant messaging and social networking capability, which we branded the T-Mobile Sidekick. We sold the Danger to Microsoft in 2008.

Today, my new company, Tessera, is at the forefront of semiconductor miniaturization technologies that enable the creation of ever-smaller cameras, cellphones, and other electronic devices.

So all told, I've helped to create more than 6,000 jobs and return \$8 billion to investors. And this work experience has given me first-hand insight into a subject that economists are only now beginning to study closely—namely, the surprisingly powerful role that start-ups play in job creation and economic growth.

Of course, economists have been studying the sources of economic growth for some time now. 50 years ago, Robert Solow discovered to everyone's great shock that virtually all economic growth—or at least 90 percent of it—comes from

technological innovation. Not capital inputs or productivity increases or anything else. Just technological innovation—the kind of breakthrough innovation that creates whole new industries and millions of new jobs. Like the development of semiconductors, personal computers, software, and the Internet.

Solow won the Nobel Prize in economics for his discovery. And most economists will tell you that innovation is still the one true source of American prosperity.

But what the economists usually won't tell you is that the kind of breakthrough innovation that creates new industries and new jobs always come from small startup companies, not large established firms.

Hewlett-Packard rejected Steve Wozniak's idea for a personal computer, so he and Steve Jobs started their own company in Jobs's garage. That's the way it's been with every single industry-creating innovation of the last 100 years or more— from cars and planes to computers, software and biotechnology.

Except in maybe one case—the cellphone industry where spectrum was controlled by the government—the key breakthroughs were all made by startups.

Now, what's even more interesting about startups—and it's something economists discovered only this past year— is that startups also create all new jobs in the U.S.

The conventional wisdom, of course, has always been that small businesses create jobs— at least most of them. But new research conducted only this past year by multiple teams of researchers found that it's actually new businesses—startups—that create jobs. And even more shocking, they create all of them!

That's right. Startups have been responsible for all net job growth in the U.S. since 1977. If you took them out of the equation and looked only at large established firms, job growth in America would actually be negative over the last 34 years.

As senior researcher Tim Kane of the Kauffman Foundation put it, “When it comes to U.S. job growth, startup companies aren't everything. They're the only thing.”

So everything depends upon start-ups: Job creation. Our standard of living. Our prosperity as a nation. The American Dream itself.

All of it depends upon technology start-ups being able to obtain capital and hire people so they can create the innovative new products, services, and medical advances that drive our national prosperity.

This is big news. It means that if the target of national policy is job creation and increased prosperity, then the Bulls Eye of that policy has got to be on startups.

And yet policy makers seem to have trouble wrapping their minds around this fact.

Last month, President Obama held a summit on job creation and invited a group of Fortune 100 CEOs to give him advice. Exactly the wrong people to talk to.

It's not just President Obama, of course. Every president and every Congress for the last 60 years has done exactly the same thing—sought advice from everyone but the one group in the world who actually creates jobs.

Entrepreneurs.

I guess somehow we're invisible, and our voices go unheard. Everyone else has a voice in Washington— Big Business, retailers, insurers, doctors, bankers, teachers, and every other interest grouping you can think of. Only entrepreneurs lack a voice.

Yet ironically, they're the “vital few”— to quote the late economist Jonathan Hughes — upon whom all society depends for progress.

So what do we entrepreneurs know about why the engine of job creation has sputtered to a halt—and what needs to be done about it?

Well, let me tell you what I've seen going on over the last decade or so in Silicon Valley—and why so many of us in the Valley refer to it as “the lost decade.”

Everywhere you go, startups are unable to get patents on their inventions approved in anything like a timely manner, thanks to a huge backlog of applications that has built up at the patent office over the last 10 years due to a lack of funding and other issues.

I will let our other distinguished speakers testify to the causes and cures for this backlog and funding problem. But I can tell you from first-hand experience as an entrepreneur what it means for startups — and for job creation as well.

Take the case of Stanford immunologist Sam Strober, one of the very top people in his field. He invented a new treatment for lupus—which is a pretty devastating disease for which there is currently no treatment except steroids for symptoms—and launched a startup called Innate Immune. He then recruited the former director of clinical research at Genentech, Dr. Andrew Perlman, to be the firm’s CEO.

Okay, so here you’ve got two world-renowned scientists with a patentable new treatment for an awful disease that afflicts millions of people —exactly the kind of opportunity that venture capitalists look for. And sure enough, Innate Immune soon had VCs lined up and ready to commit \$30 million to develop the drug.

There was only one problem: They couldn’t get a patent. Sure, they filed for it 7 going on 8 years ago. But because of the huge backlog at our underfunded and overburdened patent office, they couldn’t get it approved.

So the VCs walked away—what else could they do? I mean, who would invest the huge sums of money it takes to bring a new drug to market without the promise of market exclusivity and a healthy return on investment that a patent offers?

And with no money, of course, Innate Immune couldn’t hire the scientists and technicians and marketing and administrative staff needed to develop the drug.

We’re not just talking about Innate Immune’s new lupus treatment, of course, or about a new wound-healing gel invented by a Wisconsin startup called MatriLab. In their case, the patent finally was issued. But it was issued 7 years after the startup applied for it, which unfortunately was 2 years after it had already gone bankrupt for lack of the patent that they needed to attract investors.

This same story is repeated many times a day, each and every day, in our country. Thousands of innovative new products and potentially life-saving new medical treatments, go un-commercialized and un-available to the public each year.

And as a result, hundreds of thousands of jobs—patent office director David Kappos once said it was millions of jobs—go un-created each year.

All for lack of a patent. Or rather, for lack of the three-quarters of a million patents that lie locked up in patent office’s backlog of 1.2 million applications.

According to one top biotech lawyer in Silicon Valley I know, literally all of his life sciences startups are either stopped cold or at least stalled in their development efforts for lack of a patent. Because no patent means no funding and no business.

The problem is not just in the life sciences. According to the 2008 Berkeley Patent Survey of Entrepreneurs, 76 percent of venture-backed entrepreneurs — and 67 percent of all entrepreneurs — say patents are absolutely vital to obtaining funding.

I can testify to this personally. Looking back over my career, in fact, I can say that patents have usually —though, to be fair, not in every single case— been a major factor in the financing and ultimate success of the 6 companies that I've led.

So pick an industry, any industry with many startups. In every field, a big reason why job creation is stalled— and remember, only startups create jobs—is because patents are simply getting too hard to come by or too difficult to defend against infringers who are well aware of the long odds against a patent issuing these days.

What's the scale of this patent backlog's effect on job creation? According to my analysis of the Berkeley Patent Survey, every patent is associated with somewhere between 3 and 10 jobs. At my previous company, Danger, which had a hundred issued and pending patents, the number was 4 jobs per patent and patent application.

Now, not every patent, of course, is a job creator. I mean, I'm just guessing here, but somehow I don't think the patent issued a few years ago for a method of exercising a cat ended up getting a lot of people off the unemployment rolls.

But when retired Judge Michel and I ran the numbers last year on how many jobs might be created just by funding the patent office properly so it could clear the backlog of patent applications, we wrote in our op-ed in the New York Times that it could mean as many as 2 ¼ million new jobs.

For the meager billion dollars it would cost to get the patent office in working order, that's a fantastically cost-effective job creation plan.

Hundreds of billions to rescue Wall Street. But not a dime to help the country's single-greatest facilitator of private sector job creation to do its job properly.

It just doesn't make sense to me.

To be fair, here, the logjam in patent issuances is not the only impediment today to startup job creation—although it’s certainly a very big one.

Tax and regulatory burdens on startups have reached critical mass in the last 10 years, a fact recognized by President Obama when he signed an Executive Order last Tuesday ordering the removal of burdensome regulatory rules on business.

Also a problem is the post-9/11 immigration policies that are driving many of the world’s best and brightest scientists and engineers to other countries where they build their economies instead of our own.

But probably the biggest job killer besides the patent backlog is the systemic destruction of our high-tech manufacturing capacity.

For 30 years now, we have all been fed the carefully-cultivated myth that so long as America did the creative work, the inventing, then we could let other nations like China do the so-called “grunt work,” the manufacturing.

So we let manufacturing go. And in so doing, we lost the greatest economic force multiplier in history. For manufacturing not only provides middle-class incomes to the three-quarters of all Americans without a college degree. It also creates up to 15 additional jobs outside of manufacturing for every position on the factory floor.

We now know this policy was an unmitigated disaster. In my new book *Great Again* coming out from Harvard Business Press in May, we’ve finally assembled irrefutable proof that when manufacturing is offshored, R&D always follows.

And sure enough, already 20 percent of U.S. R&D has now moved offshore. If this keeps up, what’s going to be left of America’s fabled innovation leadership?

In our arrogance and our naiveté, we seem to have forgotten that a nation that no longer makes things will eventually forget how to invent them.

If there’s one thing I wish all of us would resolve today, it would be to spread the truth about patents. Because they are hardly the arcane legal instruments most people—citizens and lawyers alike—think they are.

They are the most potent job creators on the planet.

Thank you very much.