



## Stanford eCorner

### Portable Technologies

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Video URL: <http://ecorner.stanford.edu/videos/60/Portable-Technologies>

Hawkins talks on the importance and inevitability of portability. With portability comes small size, low cost, simplicity and the need for less power. With wireless networks on their way to becoming very inexpensive, Hawkins envisions a T1 line with high horse power and large memory in the pocket! The need for portability will make the item in your pocket the center of your universe, he says. He notes that there will be obstacles, but believes that this shift is inevitable.



#### Transcript

I've been making them smaller, smaller, smaller, and the question is, is there opportunity of making it a little bit--you know, doing the same sort of technology and making bigger? Well, Microsoft is doing this right now, right? They got the new--what are they calling it? The... Tablet. Tablet PC! I can't believe this, by the way. I don't believe this is the right thing to do. I think it's a mistake. But I can't believe Microsoft is making this mistake. They did this already. I mean, they got amnesia or something? Because they did Windows for then computing in 1990 and it was a terrible failure. And they're doing it again right now. Now I'm not a believer in that.

First of all, people really want to carry things around on them. It's really important to have portability, to have smallness, and all these things into multiplicative factor, when you're making smaller, they get cheaper. They get more rugged. They get simpler. They get easier. They use less power. It is all these things wrapped up together that smallness is better. You then might say, "Well, if you make things too small, they're not very usable." Like, you don't have a big screen, you don't have a big keyboard. There are ways of solving that problem I'm not going to talk about. But there are ways of solving that problem.

And so just think about this. I'll take one more question after this, but just think about this. A few years from now, the wireless networks are going to be virtually very inexpensive. Sprint, they just dropped basically unlimited data for \$10 a month or nothing, depending on your voice plan. And these networks then become megabit or greater networks. So you're going to have a T1 line into your pocket, very low cost. That's what it is, right? It's a T1 line. And you're going to have a very high horsepower, you're going to have tons of memory in these things, and it's going to have great audio/visual capabilities. The only problem is you've got a little display and a little keyboard. There are ways of solving that problem.

But there is just such a compelling thing to make things small that that's the way it's going to be--at least that's my belief--and that the largest screen experience then becomes--here, maybe I will leave you with this one, OK? In the beginning... Not that beginning, but, OK. In the beginning, one of the things I did at Palm, which is really a good thing to do, is we made it an accessory to the PC. We didn't say it was a computer, we didn't say it was a platform. We said, "It's an accessory to your PC. It comes with this cradle, attaches to your PC, and it works with your PC." In the future, I think it's going to be flipped around. In the future, the thing in your pocket is the center of the universe. And the big screen and the keyboard becomes an accessory to it. And I think it's a good thing. I think it's going to happen.

There's a lot of obstacles that have to be overcome to make it happen, but I almost view it as inevitable. The portability and

the low cost and the simplicity of things that you can carry around are so important. This is why there's a billion cell phone users and there's not a billion PC users in this world. Not even close. That is such an important thing that that's going to drive everything else. All the other technologies are going to figure out how to make that thing in your pocket your personal computer.