



## Profiles of Computer Scientists



**Geoffrey Fernald**

**Manager, Advanced Development Hardware Design  
(Sequoia Engineering)  
Acuson Corporation  
Mountain View, CA**

### **Education:**

B.S. - Electrical Engineering and Computer Science

M.S. - Electrical Engineering and Computer Science, University of California at Berkeley

### **Job Description:**

Senior Vice President of Engineering, managing hardware design engineers and in such applications as mechanical engineering, analog and digital electronic design, and power systems design.

### **Advice to Students:**

"I recommend everybody get a Master's degree in order to strengthen the final stages of their technical development, put themselves a little ahead of the masses with Bachelor's."

### **Video Transcript 1:**

"A bachelor's degree puts you too much in the sea of technical people. I recommend everybody get a Master's degree in order to strengthen the final stages of their technical development, put themselves a little ahead of the masses with Bachelor's in EE and it gives you a sense of being poised, not having to be afraid that you don't know enough. You can ask anybody a question, even a Ph.D."

### **Video Transcript 2:**

"In most small companies, you're at the center of their achievement. You can see very concretely the results of your work, and in a fairly short time. The disadvantage in most small companies is that they are run by a despot. And, you either get along with the despot or don't."

### **Interview:**

Geoffrey Fernald of Acuson Corporation speaks from years of experience. As a manager, he looks for "a drive to understand the technical issues" when hiring new engineers. And that drive has to combine with perseverance even for experienced engineers. "It took me four years to even understand how the ultrasound systems work. There's tremendous breadth and depth, and so that's kind of fun."

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Prepared as part of the Sloan Career Cornerstone Center ([www.careercornerstone.org](http://www.careercornerstone.org))

Source: "Careers for Electrical Engineers and Computer Scientists" © Institute of Electrical and Electronics Engineers

Fernald points out that a career goes through several stages. "In the first phases of your career, you have to be interested. There has to be enough knowledge and fun happening, and you have to be useful. After ten years in a job, you begin to become a contributor in the field. You change the way the work is done." Fernald, himself, is going through new challenges. Having managed a team that designed a completely new system, he needs to motivate people to take the next step. "How do you manage the group through a transition? That's both fun and difficult."

Through these stages, Geoff Fernald counsels young engineers to look within and stay in touch with themselves. He finds that "people's lack of job satisfaction and feeling that others are holding them back" are, actually, "characteristics in them that are preventing them from being successful making the contributions they can." The solution, he says, is to "pay attention to yourself, figure out what it is in you that's holding you back, and try to make changes that allow you to move yourself forward."

One way to reflect and refresh oneself is to take a sabbatical. "Twice in my career, I have taken fourteen months off without pay and the companies have never endorsed the length of the sabbaticals, so I've always had to quit to do this," Fernald says. But the rewards are well worth the risks. A sabbatical "creates a great deal of perspective for you in relation to your work and gives you a comfort in your life about moving around more fluidly and not feeling confined and trapped."

Fernald spent his first sabbatical traveling through Europe and "learned a tremendous amount; gained some understanding of people, languages, art, architecture, history that have been valuable the rest of my life." He spent his second sabbatical in New Hampshire. "There were tremendous learning experiences. And the perspective is unbelievably powerful. It also gave me a break. I was getting a little burned out in the steady pressure of the environment. In that sabbatical, I got a rebirth of intensity."

There was no need to worry about finding a job afterwards. "You just out and put it on your resume: Sabbatical, fourteen months driving around Europe. Nobody ever held that against me. In fact, in most cases, they saw it as a strength and I usually got three to four job offers in about two to three months."

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