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Let me introduce myself

My name is Lionel Deimel, and I'm a multi-talented generalist whose most tangible skills are related to computers and to writing. I like to be where I can employ a constellation of skills to accomplish a goal, and where quality work is valued.

What I can do for you

I can fill any of a number of roles, including that of teacher/trainer, analyst/critic, software engineer, user consultant, writer, and editor. A position that uses me most effectively would require that I play several related roles. In a smaller organization, this could mean doing several jobs for which it is impractical to hire more than one person. In a larger organization I could take on a more complex assignment or be a resource to others. Although it would be attractive to work in a software development environment where my software engineering and communication skills could be combined, I could also help end-users be more productive with their computing resources, as I have found this to be a satisfying activity as a consultant. In the right environment, I could be fulfilled in a more purely communications position.

Who I am

I am a computer scientist with a strong background in science and mathematics. I am also an excellent writer, editor, reviewer, and critic, who values clear thinking and is acutely sensitive to the subtleties of expression. I am a good teacher, trainer, and organizer. Because I both enjoy working with colleagues and appreciate the synergy arising from collaboration, I prefer leadership to management. I have a talent for teasing the best out of individuals or small groups by asking critical questions or by offering unexpected insights. I try to resolve conflicts so that everyone achieves more than he or she thought possible.

I am interested in ideas, art, and music, and I have always thought of myself as an intellectual. I enjoy working with a variety of people, however, greatly appreciate the practical, and, people tell me, have a good deal of common sense. Because I enjoy helping others, people find me a patient teacher.

What I really care about

My academic background, and particularly my mathematical training, has made me into a problem-solver. When possible, I will generalize and model a problem to deal with it. When working with others, however, especially in less technical contexts, I often find that the two most important questions are "what problem are we solving?" and "what would an acceptable solution look like?"

Ultimately, I like to build things, and I get a deep sense of satisfaction from the beauty that they can exhibit. I appreciate the elegance of a clever proof, the transparency of a well-designed user interface, and just the right shade of meaning communicated by the

proper word in an essay. This aesthetic extends to those things I cannot produce—a perfectly proportioned steam locomotive or a Prokofiev piano sonata—but I particularly appreciate getting the details right myself, be they architectural or engineering details. They should work together harmoniously, balancing elegance with usefulness and economy.

Two examples will serve to illustrate how my concerns manifest themselves and to suggest how they play out in the workplace:

- I am one of the rare programmers who actually likes to annotate code, a process I have reflected upon and studied empirically. I enjoy the challenge of explaining concisely what I have written, but I also know that articulating precisely what my program is doing forces me to verify that against what it *should* be doing. Also, careful examination of the code after it is written sometimes suggests alternatives and economies that did not present themselves earlier.
- The documents for which I did technical editing at the Software Engineering Institute were largely written for academics unfamiliar with the topics treated. I quickly learned the limitations of using expert reviewers, who were much better at evaluating technical correctness than the accessibility of the text to the intended audience. Experts, I found, unconsciously fill gaps and correct minor errors in the text without recognizing that the author has not been explicit or precise. Developing a kind of studied ignorance helped me uncover such lapses in the text and negotiate changes with the authors. In the case of a document on intellectual property protection written by two attorneys, I virtually rewrote the text to make it acceptable to computer professionals, yet I still managed to satisfy the authors.

How I've been educated

I entered the University of Chicago as a physics major, intending to get a firm grounding in theory before pursuing electronics engineering. I was already interested in computer hardware, and, when I took a computer course in my third year, I became hooked on programming. After receiving an excellent liberal education and earning my A.B. in physics, I went to Georgia Tech, where I earned an M.S. and Ph.D. in information and computer science. My graduate work was interrupted by a stint as an Army bandsman, which advanced my musical education. At Georgia Tech, I discovered the joy of teaching, which entailed both organizing the material for myself and sharing my insights with others. Although my doctoral dissertation was in automata theory and my minor was mathematics, my subsequent professional interests have invariably involved the pragmatics of software development and use. I have four decades of hands-on experience with uncounted computers—from second-generation behemoths to the latest PCs and Macs—operating systems, programming languages, and applications.

Where I've worked

After earning my Ph.D., I held faculty positions in computer science departments at North Carolina State University and Allegheny College. I was recruited as a Senior Computer Scientist by Carnegie Mellon University's then-new Software Engineering

Institute. At the SEI, my responsibilities were to promote the discipline of software engineering to universities, to produce materials for software engineering education, and to manage the production of those materials, which were mostly written by outside authors. Since leaving the SEI, I have worked as a private consultant and as Manager of Special Services for a computer services firm. I have done corporate and individual training, assisted several organizations in their transitions to upgraded computer networks, and acted as an IT resource for individuals and small firms. I develop and maintain Web sites and relational databases. I am especially pleased with my work with Microsoft Access databases, which allows me to develop complex, user-friendly interfaces, often for mission-critical applications.

In the past five years, I have volunteered a good deal of my time to Progressive Episcopalians of Pittsburgh, for which I served as its first president. My work with PEP has exercised my computer skills and provided valuable experience in leadership, marketing, and public relations. I have written position papers and press releases and regularly dealt with reporters from the national media. For PEP or with its encouragement, I have also written influential pieces of analysis and advocacy.

What I've accomplished

My accomplishments are varied. Here is a representative sample:

- I received two service awards from the Association for Computing Machinery for my work over eight years with the Scholastic Programming Contest. I served as Director of this high-visibility international student competition three times and as Chief Judge once. I managed the contest budget and a staff of volunteer professionals. Innovations during my tenure include bringing the contest to the site of the ACM Computer Science Conference, the substitution of Pascal for FORTRAN as the contest language, and the introduction of a local area network to the contest environment.
- I have published more than a dozen papers on computer science/software engineering education. The topics of these papers are varied, but they include issues of curricula, standards, test item construction, and teaching facilities. I have also published papers on program comprehension, algorithms, and other topics in computer science and engineering.
- I managed the development of curriculum modules for the Software Engineering Institute. For many of these subject area guides to software engineering and software engineering education, my most important role was that of technical editor. I am co-author of one module, *Unit Analysis and Testing*.
- As one of three former academics responsible for most of its publications, I have helped Progressive Episcopalians of Pittsburgh gain a reputation as a source of reliable information and responsible opinion within a beleaguered Episcopal Church. Personal posts on my Web site and blog have also been influential within the church.
- When my church began a renovation project, leaders were concerned that the chaos of construction would cause parishioners to stay home. To keep

people informed and interested, I created and maintained a “Construction Update” bulletin board for the duration of the project. This wall-mounted newsletter was so popular that I was asked to re-create it during another construction project several years later. I published an article about the project in a church journal.

- In developing a database for a steel fabricating company, I discovered that the geometry of its products was only being estimated. Although it was not specified explicitly as a job task, I developed a rigorous mathematical model of the product and incorporated corresponding calculations into the database. This resulted in better cost estimates and inventory control.
- One of the educational materials packages I created for the Software Engineering Institute is *Scenes of Software Inspections: Video Dramatizations for the Classroom*. It consists of a videotape containing 11 brief scenes related to software inspections, and a report analyzing the scenes and suggesting how they can be used in the classroom. The professionally acted scenes had been created for another project, but the interactive hardware on which they were to be displayed was never developed commercially. I proposed and developed the repackaging that proved popular, particular in commercial environments.
- I consulted as a technical expert for SAS Institute Inc. in connection with *SAS v. S&H Computer*. I developed evidence of copyright and license violations by examining program listings and other materials. I also developed the framework within which evidence was presented at the trial that ended in a ruling in favor of SAS.

What else I’m interested in

I love music, particularly the works of Prokofiev and Bach, but also jazz and folk. I follow developments in politics and science closely, and I am addicted to National Public Radio. I am a baseball fan, railfan, and photographer. I read too much of what I must read and too little of what I would like to read. I am active in my church, particularly so once I discovered that I could serve others with the talents I do have, which are not the stereotypical “pastoral” ones. I sing in the choir, serve on the Worship Commission, and work with lighting and sound. Since launching my own Web site, “Lionel Deimel’s Farrago,” I have become an active essayist, poet, and composer.