To: Brian W. Pollard
May 5, 1969
IEEE Computer Group
Administration Committee
(ADCOM)

From: H. Kleinberg

Dear Brian:

Some time ago (too long ago for the good of my conscience), we spoke about the general problem of Engineering professionalism, and the nurturing of it in an industrial environment. One of the problems you mentioned was the difficulty of getting our engineers to join professional societies, and when I said that I do not belong to any either, a fairly lively discussion between us followed. As I recall, it was just getting warm when we had to break it off, and I promised to write you a letter outlining the reasons why I do not belong to any professional societies. Here is that letter.

I guess the basic reason is that I don’t feel any real need to belong. This is a very fine statement, but it begs the question, and raises some new ones: “What need should I feel? Is it a lack in me, or in the societies that is the cause?” Let’s talk about these a bit.

As I understand these societies, they originally came into existence to provide three things that their potential members wanted:

1. Exchange of information with other workers in the same field through the medium of a journal and through personal contact at seminars and conventions.
2. Social contact with a group composed of people with similar interests. While this overlaps with the first point, I feel that it is important enough to call out separately.
3. Prestige. It gives one a sense of acceptance and achievement to be admitted to the ranks of a special group. It also rounds out a resume very nicely.

I contend that only the third point is valid for most engineers working in large companies in this seventh decade of the twentieth century. The other two are fulfilled in much better ways by other social phenomena.

Any engineer who depended on journals, proceedings or prepared papers from the professional societies to keep himself current, technologically, would be a fool. The time lag alone is deadly, and the fact that the pattern of research has changed is an added factor. No longer does the only line of research and development run from the universities to the learned societies to industry. Now the great corporate laboratories and the universities do overlapping and interacting research, and the results are available within industry far more quickly than they are through the journals. This fast internal communication is bolstered by the jet plane. Visits to vendors, licensees, universities, and even to competitors, are fast, easy ways to find out what’s new in your areas of interest.

The social contact is achieved today largely through the services of that same jet aircraft, but also through another modern-day custom—job changing. I’m sure that you have, as I do, friends in every major computer company with whom you have worked at some time in your career. This is true for most engineers, whether they themselves move from one company to another or stay where they are and greet people as they come and go.

This, to my satisfaction, dispenses of the first two points, technical interchange and social contact, and leaves only the third—prestige. I recognize this as a valid and honest personal requirement. It just happens that my own needs in this area are fulfilled in other ways.

So that’s the negative side of the coin. What about the reasons for keeping the professional societies alive and growing? Aren’t there any needs the modern engineer feels that these societies could fill? You bet your sweet logic template there are.

I see today’s engineer grappling with two basic problems that have no easy solutions. The first is his responsibility to the social order in which he lives; the second is his relationship to his employer and his colleagues in this age of vast corporations and massive team projects. It would be easy to write a book-length polemic on each of these—in fact, it has probably been done—but I’ll try to restrict myself to a paragraph or two apiece.

The standard picture of the engineer portrays a studious, pale fellow, whose clothes are sober and conservative and don’t really fit well. His breast pocket displays an array of pencils and ball-point pens, garnished with a small slide rule. In essence—he’s square. This stereotype is as true as any generality can be, but the guy inside this pedestrian, glamorous shell is one of the true revolutionaries of history. He’s a troublemaker of epic proportions. He generates change. Not the trivial kinds of change that come and go as fads and styles, but deep, basic changes that affect the very way in which our society is structured.

His agricultural machinery feeds the world, and drives illiterate, unskilled farm laborers into city slums. His electronic communications can inform and unite mankind, and can spread just as well the venom of the worst demagogues. His computers can guide men to the moon and can reduce them to “frustrated,” nameless digits. I could go on and on.

In all these developments that are shaking our social order, the entrepreneur, labor and others play important parts, but the real root (radical) force is the engineer. In the cities and campuses the flamboyant characters in flowing hair and sandals aren’t making a revolution—they’re trying desperately to adjust to one. And the man who made it is the engineer.

What are his responsibilities, as an individual, to the society he is so drastically affecting? Do the effects of what he does bear no relationship to his professional life? Should he be committed to preparing society for the impact of his work? Should he try to lead his society to adaptation, or should he work as a follower through present institutions? I don’t know how many engineers spend any time thinking about questions like this, but I think they are valid ones for an engineering society to tackle. I would join such a group.

I would join, too, a society that offered a forum for discussion of the engineer’s role as an employee. Here he faces a dilemma that has grown more perplexing every year. How does he reconcile his training as a professional with his apparent standing as a high-salaried employee—one of several thousand in a large corporation? Does he discard the profession completely, and go to labor unionism? How does he exercise his professionalism when he doesn’t control some of the basic decisions? These, too, are questions of relevance and importance to the engineer, and should be the same to his professional societies.

In summary, Brian, the world is boiling with change, largely of our making. We may not want it to change, we may object or we may go along, but change it will. Do we ignore it completely, or do we try to play an active, constructive role? Here, I think, the professional societies can play a part that is really significant to the individual engineer—in fact, they must do so if they are to avoid a historical dead-end.

Let me make it clear that I am not looking for a new political party, and I don’t expect instant revelation to occur on these questions. But I think I can rightfully expect a forum where thoughts and opinions can be exchanged on these topics, where I can find out how other engineers are reacting, and what they feel they can do. I have no hope of finding this through the state Professional Engineering groups—they’re still busy revelling in the fact that George Washington was a surveyor. How about the societies?

Sincerely,

H. Kleinberg