Memories of Frank Heart

For most of my professional career I worked for Frank Heart, for three years indirectly, and for the majority of the next 24 years directly. During that time Frank became a close friend of my family, as well as being my boss. Frank's death leaves a huge hole in my heart.

When I first came to work at BBN my view of the relationship between workers and managers was very much an "us vs. them" attitude. My own supervisor, Paul Castleman, seemed to me more like a team leader than a "manager". But there was this new guy down the hall from Paul who was hired to be Paul's boss and who was constantly yelling. I was sure that a manager yelling was a sign that workers were in trouble. That new guy was Frank Heart. Even though no ax ever fell, I was sure it was about to. After a while Frank began hiring people he had previously worked with (who came looking for a chance to work with him again) and they all seemed to be from MIT. I was not from MIT, and became convinced that Frank had a bias against anyone not from MIT. Still, no axes were falling on those of us not wearing the MIT "brass rat".

At the end of three years at BBN I took a 6 month leave of absence to go camping in Europe. When I returned, November 1, 1970, Paul didn't have a job available and I was asked if I would help out on the ARPAnet project working for Frank. With some trepidation I said yes. It was one of the luckiest events of my life! As I got to know Frank, I realized that his raised voice was a sign of passion and enthusiasm, not anger. The time to beware of Frank's mood was when he got very quiet. I learned that Frank liked to surround himself with the smartest people he could find - "more neurons per cubic centimeter" was the way he put it – and he felt MIT did a good job of selecting for smartness. But he had no bias against people from other backgrounds and I was able to convince him I was smart enough to be part of his inner circle.

In my experience, Frank was a paternalistic manager in the best sense. He wanted every employee to be a star, and he did his best to provide the working conditions and the job description appropriate to the skills and interests of each person. [Major Exception: computer support. Frank was quite stingy in budgeting for computer cycles whether in buying TENEX cycles from the RCC, buying workstations, or buying PCs. He seemed to feel that requests for better equipment were rooted in bragging rights rather than in real need. Probably he remembered the slow small computers he first worked with and found it hard to believe a good programmer needed anything more.] Frank considered it a personal failure whenever people who worked for him decided to take another job, and as far as I know was always willing to take them back. In my own case, I know I made some foolish decisions that drew the ire of Frank's bosses, but he always stood up for me. I believe the same was true for almost everyone. It can be said that every public company has 3 sets of stakeholders: investors, employees, and customers. In my view Frank always put the employees first and the customers second, which left the investors last. I believe Frank always delivered for the investors, but it was a joy to know they were not the stakeholders uppermost in his mind.

Frank was a good engineer with strong opinions, but he was always open-minded and could be persuaded by rational argument. I witnessed many cases where Frank had a really good idea for an approach to some challenge, but someone else came up with an even better idea and that's the way we went. I have had a fair amount of exposure to other managers who got their egos mixed up with their engineering and insisted on their own approaches. It was wonderful to work for someone who was pleased that his team members came up with an idea that was better than his own.

Of course, Frank could generate plenty of ideas of his own, but was also a master at evaluating the

ideas of others. Tom Fortmann once observed that Tom could lead a team spending a month generating a 100-page proposal for some new work. It would go to Frank for an overnight review a day or two before the deadline for submission. Frank would give it back the next morning with the one area the team wasn't quite sure of circled in red, with a set of insightful questions in the margin. Frank tried to teach us all to minimize the variables in the easy parts of a project so as to focus energy on the really hard parts. It is always enticing to add bells and whistles to the easy parts, but that wasn't where it made sense to spend our energy. That's why so many of the projects carried out under Frank's leadership came in on time and under budget.

I also have memories of some exotic business trips with Frank. One was a trip to a conference in Stockholm where, on a free day, we wandered the old town, visited a "Sturbridge Village" type town of old farm buildings, and had dinner at "Fem Sma Hus" (Five Small Houses) a renowned restaurant of Swedish cuisine (Frank was interested in dining at as many famous restaurants as he could manage - me not so much - but the food was delicious). The most memorable trip was a junket to South Africa for a week to try to sell some BBN networking hardware and consulting to a major bank. It was during the time of anti-apartheid action, and Frank really didn't want to antagonize the BBN staff by working for a white South African outfit, but he didn't want to flat-out refuse either. So he piled on conditions he thought might kill the deal. They didn't, but as a result we flew first class all the way, stopped in Rio de Janeiro for a weekend on the way there, got taken on a 3-day safari in Kruger National Park after our week of business meetings, and after all that flew (on our own nickle) to Rhodesia (now Zimbabwe) to visit Victoria Falls. We took a late afternoon cruise on the Zambezi River above the falls, and for years afterwards Frank was fond of saying, at social events, "when I was having cocktails on the Zambezi River ..."

No one is perfect. The top management of BBN, including Frank, wanted to turn our funded research projects into products, but after charging a high purchase price or license fee BBN also wanted the customer to pay for bug fixes, customer support, and enhancements on a contract basis rather than having these items included in the purchase price. This was out of step with the way most of the rest of the world worked, and in my opinion resulted in a low BBN success rate in commercialization. But as an R&D consulting company engineering manager, and as a friend, Frank was tops.

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BBN 1967-1996