Jay Denny

My name is Jay Denny and my job at Hewlett-Packard is as follows. I am responsible for all systems engineering services worldwide.

My objective is to discuss: 1) a perspective of Computer Systems Group; 2) why this organization is of benefit to you; and 3) how your local Hewlett-Packard team that we have allocated around you is coordinated and supported by Computer Systems group. The next two subjects I would like to talk about very specifically is Customer Engineering division, and the Systems Engineering Services program.

Here you see that our group is actually broken down into two basic enities. Each division has a marketing, research and development, and a manufacturing team. The various divisions are: 1) General Systems (3000); 2) Data Systems (1000); and (disc and magnetic tape), and Terminal Products Division. Divisions are Hewlett-Packard's way of managing our business. One of the newest divisions is Customer Engineering Division. The other portion of Hewlett-Packard is the Field Marketing Organization. That particular organization's job is to 1) support and assist the customer and 2) sell Hewlett-Packard products. That is made up of three basic employees. The sales representative, the system engineering personnel, and customer engineering personnel. As you can see, Paul Ely, our vice-president, keeps us operating as a single unit.

Each one of the divisions are profit centers. A general rule of thumb in Hewlett-Packard is to break down every particular portion of our business into some manageable enity. When these profit centers become up around 100 million dollars, we start looking very carefully at ways to break them apart to manage that business more effectively.

As our customer, you are surrounded by three of our representatives. My objective is to give you a brief idea of the jobs of those three people, the management team supporting them, and briefly, the functional team that is supporting them. The real benefits of our organization is not going to be visible unless it really does assist you as customers.

The sales representative. This person coordinates the team. His direct management is the district sales manager, regional sales manager, and national sales manager. The national sales managers are Jim Schnider and Bill Richion (408/257-7000).

The system engineering personnel. These are involved in technical education, technical evaluation, and technical information. His immediate responsible boss is the district sales manager and the regional sales managers. I am responsible worldwide for this organization (Jay Denny, 408/257-7000).

Customer engineering. The CE's are responsible for preventive maintenance and repair of the system. You can see that their organization structure is district CE manager, regional CE manager, customer engineering service manager (Tom Lauhan, 408/257-7000).

Every member of this team has organizations supporting that team. For example, if you ask your sales representative a question about the product (the price, the technical features, specifications) that he can't answer, a sales support organization within each division assures that he gets the answer to you on a timely basis, typically in a couple of days.

The systems engineering personnel also have support organizations. If you ask them a technical question that they cannot answer, they have an organization at the factory that they may call to get the technical answer for you.

Customer engineering. Customer engineering has a series of support mechanisms. If the customer engineer cannot resolve your problems, he has an immediate management backup team, but he also has a product specialist supporting him. If that team cannot resolve the problem, the divisions have a support mechanism as well.

Why is this important to the users group? Why is it important to you as the customer? When you are talking about having a new feature added to my fortran

compiler or a new feature added to my cobal compiler, this is a development project.
The divisions are responsible for all development.  The users group has set up
the right channels to discuss those subjects with us.  Your interface committee
definitely does have a good channel in the division.  If you are concerned about
operational problems or you would like to give us operational hints of how we can
do a better job for you, the field marketing is responsible for assisting on these
subjects.  If you have a question about the level of support in a particular geo-
graphy, the field marketing team is the right people to interface with.

I thought I would spend most of my time now talking about two specific enities
of the group.  The first is Customer engineering division or Customer Engineering
Service.  Customer engineering is a service that our customers will always utilize.
If you don't utilize these services either through service contracts or a time
and material basis, most potentially your system will not function correctly for
you.  So by definition, all customers will have a service contract on a 3000
product now.

Recently we looked at our customer engineering organization and said we would
like to put more management focus on it and get some more research dollars into
doing a better job for our customer.  So we formed a division.  The major advantage
here is, as I said, is this is Hewlett-Packard's way of focusing in on solving
problems.  It is the first Services division at HP.  It is divided into marketing,
engineering, and manufacturing.  Marketing is responsible for setting the policies
so HP has consistent policies, pricing, CE support.  Describing the services to
our cusomters so you understand them and your expectations are not raised beyond
the level they should be.  Additionally, logisitics are of concern to marketing.
Where do you put these people?  Where do you put the inventory?  Where do you put
the tools?  When do you train them?

The engineering department of the division is the science of reliability. Development of CE tools. Customer engineering tools (software or hardware) helps HP do a more effective job for you. Manufacturing is really the field located customer engineering organization. This includes both the people and part inventory to help you locally.

I think it is important to understand that the impact of this division won't be seen by the customers for a year. Initially, in the first six months what you will find is that HP may have clearer policies. But, new customer engineering tools to help us do a better job for you is a development project; and it is like any development project, it is going to be some time before you see the benefits of this program.

When do you use customer engineering service as a customer? Call customer engineering if: 1) a peripheral does not work properly; 2) the system halts or a parity light is on; and 3) when an operator can no longer control the system. Does everyone know their local customer engineering managers? Please try to meet this individual over the next three months. How many of you know your regional Customer Engineering Manager? We have five regions: Midwest, Canada, West Coast, Southern, Eastern. If in an event you become extremely dissatisfied with Hewlett-Packard (I am not suggesting that you do this as a normal operating procedure), please tell us about it, and don't wait until it is too late. When management knows early enough about your situation we can help.

If as you are going through the year, you find you might be a little bit dissatisfied with the overall service program. It isn't that your system has been down, but there are some things you can point to. For example, maybe we don't always put the bolts back together right, your lights are burned out. When the customer engineer comes around, mention it. The immediate responsibility in your area is

the Customer Engineering District Manager and he is an individual you need to get to know.

How is sales involved in my service problems?  Sales sold this equipment. The philosophy of our company is that we service things because we sell them.  The regional CE manager has a dual responsibility to the regional sales manager.  But when you have a specific down system, the motivating enity to come up with game plan and to make sure your system is operational within a reasonable period of time is the customer engineering organization.

Supporting the customer engineer is the Products Specialist team.  The product specialist's job in customer engineering is to be highly software intensive on MPE.  By definition, if your system halts, it is an MPE failure.  There are two types of failures.  1) Hard failure.  You found one that is really a hard one. You try a warm start.  It will not come back up.  It could be a hardware failure at that point.  It could be a very hard software failure.  In that case, call in customer engineering.  Regarding software failures, we immediately assign a design engineer in the lab to resolve it.

The second failure mode is when it is intermintent software failures.  They are very complex to find.  If you left your system down and called our customer engineering, the chances are there is not enough information left at that point to solve that problem today.  Instead, please use the warm start mechanism.  The objective is to take some data from that particular problem, get you back up on the air into a production environment as soon as possible.  And, we try to corrolate that data at the regional levels.  Now, if you can imagine, we get a number of these failures, we corrolate them, it gives us symptoms, then we can get to the specific portion of the software that is failing.

When you have a repeatable MPE error, it crashes your system, it is to our advantage that you make sure that we know about it. If it is repeatable, we can find it at the factory and fix it.

I think it is important that you understand where we are. We haven't done a 100% job. But, do not tolerate an extensive down period of time. I talked to a gentleman last week who said a portion of his system had been down for eight weeks. That is intolerable. There is absolutely no other way to put it.

System engineering. I am going to talk about the system engineer. If you recall my discussion on customer engineering, briefly, I said that basically it was a service that you would all want to buy and couldn't do without. System engineering services are different. We do not just help you to be successful by training your staff, helping to make them more productive. Our objective isn't to hide from you our system capabilities or to keep you unaware. In fact, our objective in this area is that we expect you, as a customer, to allocate one of your people to become, in effect, your personal system engineer. What that means is we need to train your people to become talented technically. The objective of System Engineering Services is to train your personnel. Requirement for this service varies from customer to customer depending on what your 1) specific application is and 2) specific talent is. So, it is what I call a discretionary service. We provide the opportunity for you to get your staff trained, but we can't tell you what services you must take. If you don't take the training, we assume basically that you are so talented that you don't require them. Planning System Engineering requirement at HP has not been effective. This is my personnel chapter. Today we roughly have in the North American continent fifty-five 3000 system engineers. We have done a lot of hiring to get to that number and they are not all well trained. But, they can provide the basic set of services typically required.

Customer training in a technical center. What is a technical center? We have reestablished the roles of the technical centers, or what you might have called previously the training center. Their roles will expand over time and provide a complete set of services. A developmental program is under way which is to help our customers learn quicker and more extensively about the system in our normal training center environment. Advanced courses you can send your staff to. They are not here today, but they are going to be here within three months. Technical centers are those places that the training is going to be available at. Another method of taking a course is you may purchase the course to be taught at your facility. Unless you have a staff of five or ten people, this may not be a cost effective way for you to get training. We are looking at alternative ways to make it easier for you to train your staff.

What is phone-in consulting? I would like to think of phone-in consulting as admittedly our training courses are not going to answer all the questions, and our documentation is not going to answer all the questions. This is a vehicle that we tried to design, to come up with, to augment training. I believe it could be a valuable tool if you use it. As an example, your staff is stumped on a problem for four hours. And, if they could pick up the telephone and get an answer within an hour, they could be productive again. Now, we would like that to happen. I believe that this service is a reasonable tool for you to utilize. What I said initially was that your going to end up with a system engineer on your staff, eventually. At some point in time you will be self-sufficient, theoretically. Eventually all of you should, if your program is successful, not have a requirement to call more than three or four times a month.

Now, I said over time you would become self-sufficient. The fact is, that is not really true. You have proven, beyond a shadow of a doubt, that you will not

be self-sufficient. You promote your people, move them to another installation, and suddenly the same training problems reoccur. It is a real problem.

System Engineering time. This is just your ability, if you prefer, to utilize our SE's onsite so they may assist your staff. For example, how to potentially design a particular portion of the data base you have decided to implement.

The training material and tools. I believe we have to provide you with access to training material and tools, like video tapes in the future, that will help you train your internal staff and help us train you.

On the subject of subsystem bugs. I think that is a point that I heard a lot of conversation about. And, sometimes it is confusing. Our experience has been that the majority of the time that our customers feel they have a subsystem bug, it really is not a subsystem bug but they really have a misunderstanding of our products. It turns out that about fifteen percent of the time there is actually a bug. Probably another ten percent of the time, a total of one-quarter, it is a documentation error that misled our customers. When that happens, a system engineer is responsible in assuring that that bug is resolved. Where are we today? I think it is important to understand that today our program is running very lean. What that means to you, it may require that when you have a subsystem bug, you have to help us in ways. The way we define the subsystem bugs, I would like to ask for your help in two categories. If it severely impacts you and your operation I want it resolved as fast as we possibly can respond as a company. To give you an example, we have resolved these problems in three to five days. That has been redesigned and back installed. However, if it is a simpler problem which does not cause you harm, please avoid using that portion of the software if possible. If you help us determine those that are critical to you, we definite have the resources to help you.

A situation that could occur is as follows: we delivered a mit tape with the objective of making a better, more reliable system. What we actually did we accidentally introduced a new error which affected all the production programs. What should you do as a customer in that situation? One thing you can do is go back to the previous mit tape. Don't be afraid to tell us that it is critical. I don't want you to do a workaround for fifty or sixty days and you are required to undo all those workarounds to utilize the patch.

If you have any inputs that will assist SE programs, I would like to have them. My address is as follows: Jay Denny, System Engineering Services Manager, Computer Systems Group, 11000 Wolfe Road, Cupertino, California 95014.