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Improved Information Collection and Communication Won Credibility for Support's Input on Product Design

By David G. Keifer, Cutler-Hammer Automation

At Cutler-Hammer Automation, we have applied the ideas and research you have been reading about in the rest of this Special Report and carved out an important role for our Support organization in product design and defect prevention.

Cutler-Hammer is a supplier of hardware and software products that are used in manufacturing environments. We operate an external help desk with about 30 engineers handling an average 5,000 calls per month.

As part of a call reduction/avoidance effort, we decided to get our Support organization more involved in product development and quality management. But it was clear, before we could do that, we needed to create some structure for cross-departmental information exchange.

We had formal processes for product development and product release and, within the Support department, there were established processes for call logging, call escalation and other routine procedures. It was in the intersections between Support and other departments where our methods tended to be informal and inefficient. For example, when support issues came up that required a product fix, it might be handled in any number of ways. Sometimes our second tier support engineers would bring it directly to the attention of the product engineers. Sometimes they would tell me "Hey, we have a situation with this product. You have to get with engineering." In other cases, they would go to Marketing. And sometimes they weren't saying anything to anyone. Not surprisingly, the response to such issues was inconsistent and often very slow.

Liaisons: The Critical Element

After hearing Fred Van Bennekom give a presentation on Support's role in quality management, I realized that what we needed was a job function based on his "liaison" concept. We needed someone to take responsibility for collecting support information and communicating it to the rest of our organization.

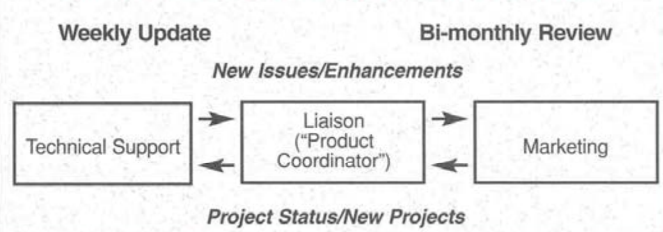
Liaison can be a job unto itself, but it doesn't have to be. You don't necessarily hire additional staff. You can use the resources you already have on staff. We turned to our five second tier support engineers to fill this role. Each second tier engineer has an additional assignment as a "coordinator" for a specific product line.

Using existing staff resources doesn't mean, however, that this can be an informal arrangement. It is critical to spell out your expectations for the liaison role and write them into the job description of the staff you decide to tap.

Who you select to fill this role will depend a lot on your individual situation. Using second-tier engineers made sense for us for a couple of reasons: first, this group had some technical credibility; second, they were not completely tied to the phones, so they had sufficient flexibility to interact with Engineering, Marketing and third-party suppliers.

Having some technical credibility helps when you are dealing with these other parts of the organization, although it isn't the most important qualification. We have found that communications skills and customer relations skills are actually more important for this role than product or technical expertise. Someone in this position must, first and foremost, function as an emissary for Support, establishing new relationships and fortifying weak ones.

Liaison Role Structures Communication Flows



Communication is not a strength for everyone. Don't force this role upon someone who just doesn't have that capability. Acknowledge the issue and look for an alternative.

Sometimes, if you have trouble finding the right skill combination, you may need to insert yourself into the process. For example, I actually had one individual who was creating more conflict than he was solving. I've teamed up with that individual, a technically brilliant engineer.

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We go to meetings together and I help with the political side or customer relations side of the process. When I need technical information he is there to support me.

We assigned liaisons based on product lines, primarily because that was the way the rest of the company was organized. We felt our Support liaisons would function more effectively if they could interact with direct counterparts in Marketing, Engineering and Development, as opposed to trying to cover multiple product lines and deal with multiple individuals. We also believed that it was very important to structure this interface according to the methods of the departments with whom we wanted to communicate. People will be a lot more willing to work with you if you demonstrate that you are willing to accommodate their requirements.

Information Selection: Supply What They Need

The need to understand the priorities and requirements of the departments you want to work with applies to information collection as well. The natural first reaction is to only collect information that is pertinent to Support, which usually means defects and bugs. That's the way we started. But, as we found out, if you want to develop relationships with Engineering and Marketing, you also have to look at how they are organized and at the information they are interested in and try to provide something that they will regard as having positive value (see box titled, "Types of Information Exchanged at Meetings" on page 15). If you do, they become much more responsive to receiving information from you. In fact they start looking for it and even coming after it.

Communicating requests for product enhancements is a prime example of an area where Support can bring a positive contribution. Because support engineers are always interacting with customers, they are in a great position to collect information about what customers would like to see added to products.

Another type of information we collect is what we call Support Issues. This is a very general category which includes anything that impacts either our ability to support the product or the usability of the product. If we need additional training on a certain product feature and it is impacting our ability to support the product, that's a Support Issue. Lack of adequate documentation would be a Support Issue.

Product usability is a conversation in itself, but we included it under this rubric because we felt it was such a gray zone that, if we put it under product issues, people would wind up debating it, instead of just acknowledging it and looking for ways to address it. It is also worth noting that we've teamed up with our Sales department and solicited their input to help us pass judgement on what qualifies as a usability issue.

Identifying what information you should be providing to other departments is not a one-time event. As relationships become more established, additional possibilities will emerge and wish lists will develop.

It is also important to recognize that information collection and dissemination is not a one-way street. The Support liaison should not be simply an information delivery system, but a means of creating a dialog—a two-way exchange of information. When your liaison begins to sit down regularly with counterparts in other departments, they have a natural opportunity to collect valuable advance information and should understand that this is part of their responsibility.

When we developed our program, we clearly established that information about future product releases—future loads, potential enhancements and/or fixes—should also flow back to Support from Marketing and Engineering.

Formalize Collection/ Communication Procedures

The two parts of the liaison role are collecting and communicating information. From the collecting standpoint, the most fundamental requirement is to establish a single repository for information that you want to communicate. Call management software that allows you customized reports is probably the best means of collecting and reporting this information, but it isn't a necessity. We've been between call management tools ourselves, and have had to use Microsoft Word as our log and worksheet.

Based on what we collect in that log, we deliver face-to-face reports in regular meetings with the other departments. Most of the information that we want to communicate outward—product issues and support issues—comes from our tier-one support engineers. In the interest of making sure that this information is forwarded to the liaisons we did everything we could to make the delivery process easy and convenient. We instituted weekly meetings between the support engineers and the liaisons during which information is passed, discussed and reviewed. We also said that, beyond those meetings, information could be sent to the liaisons by voice mail, e-mail, or hard copies of the call reports.

We ask our support engineers to participate in management of the information flow by assigning codes for the severity and scope of the issues they log with the

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liaisons. The coding is simple, just 1 through 3 for both scales. A #1 severity code generally means the issue is going to prevent the operation of the product. In terms of scope, an issue would be given a #1 if it is something that is likely to impact every customer.

As mentioned above, the issues that are logged are discussed in bimonthly meetings with Engineering, Marketing and our third-party product suppliers. We feel that is crucial both that these meetings be scheduled and that they be face to face. We do e-mail copies of the product log several days in advance of the meeting as a courtesy, but we don't ever allow this to substitute for a meeting. Communicating by e-mail or by phone is too informal and does little to foster the larger goal of this process, which is to develop relationships. The meetings are really where the communications exchange starts to take place.

Making it Work

Simply appointing liaisons and establishing collection and communication procedures does not guarantee that meaningful information exchange will take place and that Support will be accepted as an equal partner in quality management and product development. For many companies (including our own), achieving that end requires a radical cultural change. When this is the case, making sure that the process actually takes hold and produces the desired results demands both good planning and constant vigilance. We made our share of missteps along the way. Here are some of the lessons we've learned by trial and error and some of the steps we've taken to ensure that our structures produce substantive communication:

- **Build an appetite for your information:** You can't approach this process through directives. Having the president of the company stand up and say, "You WILL do this. Support, Marketing and Engineering are going to meet twice a month," isn't the best way to build a relationship. Instead, we began by collecting information we believed would whet the appetites of the other departments and compiling it in formats they could use. That way, we actually had something we could show them and discuss. I'd get them over lunch meetings and offer them a tempting taste of information. If it happened to be Marketing, I'd say something like, "I'm offering you 4,000 surveys a month for free. It just happens to include some product issues and problems, but that's a detail."

- **Shut down bypass routes:** We had some trouble getting the first tier support engineers to pass information to the liaisons. They weren't used to the discipline of putting issues onto a separate log and many of them thought it was an empty exercise that wouldn't really produce results.

  Support engineers sometimes get used to having their concerns ignored by other parts of the organization and resist the idea of spending any extra time or effort documenting issues. When they ran into persistent problems that required some outside intervention, they'd toss the ball to someone, usually me and usually in a hallway conversation. Finally, I had to draw a line and refuse to deal with anything that wasn't on the log. Whenever somebody stopped me to ask, "What are we going to do about this? When are we going to fix this?," I'd tell them, "Get it on the log, prioritize it and I'll get it taken care of for you." You have to be firm if you hope to break old habits and attitudes.

- **Insist on face-to-face meetings:** We've found this to be the hardest part of the program to maintain and one that must be managed very closely. Everyone is so busy that you start pushing those meetings aside; you start rescheduling them; you stop having them. I've asked the liaisons to make sure that, if they find they can't attend a meeting, they get a substitute to handle it, even if that substitute has to be one of the department managers or myself. If someone from the other organization can't make it, we want it rescheduled to occur within a week.

- **Demand concrete meeting outcomes:** We found that meetings could easily degenerate into pro-forma status updates, which didn't drive any new and substantive information exchange or product changes. Our liaisons were often hesitant to press for answers and positions on issues. As a result, we started to push the liaisons to be more aggressive and to make sure that they walked out of those meetings with at least a temporary action plan, a workaround, or something they could use in the short term. Ultimately, we want some sort of committed action on the issues we raise, but our experience has been that, without temporary action plans, you don't get permanent improvements.

- **Conduct audits:** We periodically audit the performance of our liaisons to make sure that the process doesn't lose momentum, as it easily can when the initial glow wears off and people get busy. We found that, sometimes, even though they were receiving information on voice mail or e-mail from the first tier engineers, they would just stop updating the log when things got busy. So we instituted these audits to ensure that information was being collected and logged and that all the necessary meetings were taking place.

- **Protect credibility by verifying problems:** As you set up this process, it is very important to make sure you

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draw very clear distinctions between communicating issues through the liaisons and the normal process of escalation. We initially encountered some confusion on this point and had to carefully explain that the purpose of the liaison role was not to replace research. We found people were putting issues on the log while they were still being researched, and had to insist that we do some root cause analysis before we brought any issue to the attention of Engineering and Marketing. Making other departments run around in circles to address an issue that later turns out to be a user mistake isn't good use of their time and impacts your credibility. Issues only go into the liaison logs after they have been confirmed as defects and it has been determined that Support cannot handle them without guidance and assistance from other parts of the company.

Benefits for All

We have realized multiple benefits from the creation of a strong liaison structure at Cutler-Hammer. Because of the relationships we have been able to build with Marketing and Engineering, starting out with communication about defect issues, Support now participates in market requirements specs and the functional requirements specs for new product development. We have moved from after-the-fact communication about defects in released products to substantive involvement at the development stage. Support engineers are there at the beginning, when new feature/function sets are conceptualized and prioritized because of the credibility they have built.

We're just beginning to try to quantify the bottom line benefit of this early participation in terms of reductions in the cost of support by product line and in the cost of pre-release testing. Even though we don't have the numbers yet, I'm confident that the impact will be substantial.

We already know that building relationships with other parts of the organization and establishing a fund of credibility has resulted in faster responses on existing product issues. Not only are we able to communicate more effectively through our liaisons, who are armed with well-organized logs, but we have also been able to convince Engineering and Marketing that we know what we are talking about when we assign high priority to particular issues.

Our early and ongoing involvement in product design and development means we are no longer blindsided by new product issues.

Beyond that, the formalization of our information collection process, particularly with regard to support issues, has helped with the internal management of Support.

Defect tracking software, particularly some of the more substantive quality management software now hitting the market, can help considerably with information collection and communication. However, not even the most comprehensive package can replace the liaison role. Without a personal emissary and face-to-face contact, you cannot build the strong relationships necessary to move Support into a preventive role. ■

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Types of Information Exchanged at Meetings

- Confirmed Product Issues
  - Not used for customer issued investigation
  - Call tracking software used for logging individual calls
- Requested Enhancements
  - Customer or internal improvement suggestions
- Future Product Releases
  - Information regarding future loads, potential enhancements and/or fixes
- Issues Affecting Support of This Product Line
  - Example: need for additional training or research equipment
  - Example: need for change to call routing menus