

SESSION REPORT



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Not too long ago, my wife and I decided to remodel the kitchen in our home and went to a firm specializing in this work. The salesman there is paid when he has made a sale, not for any suggested plans he draws up. So, after many months - my wife and I do not make remodeling decisions easily - he gave up on us.

We started with another salesman, and it was 15 months before we indicated we were satisfied with his final proposal. He drew a final "picture" of the proposed job, a detailed schematic, added two straight lines under these drawings, and asked both my wife and me to sign, with these words: "That's exactly what you're going to get, for the cost we've agreed on, and the time of completion. If you want to make any changes, they will affect the cost and the time of completion."

He made it clear that if we failed to sign, there would be no agreement. In short, he was prepared to see 15 months' effort go down the drain - because he knew from experience that if he did not get our signed agreement, the potential problems could outweigh any benefits the job would bring.

There is an analogy here to a dp professional, representing his department on an application development project, and an end user. The dp professional is the salesperson and the end user the customer. Note, however, what usually happens when the "salesman" asks the "customer" to sign on the dotted line; the end user refuses, for any number of reasons, including the simple fact that the end user sees no purpose to it and refuses to be tied down.

The result is predictable. System designers need quantities of information that appear endless to the end user, who doesn't understand why such detail is required. Without advance agreement on the level of detail needed, dp people do not get the information they need; without such detail, the designer's system does not work as it should and the end user is dissatisfied. His propensity to make changes after a basic design is agreed on, without understanding why the changes should create any great difficulties, increases the potential for complications.

A "signed and sealed" agreement could prevent much of this, but the dp representative finds it difficult to convince the user that such an agreement (and the considerable work for the user that it implies) is necessary, and that it is reasonable for the dp professional to expect to have one.

I am convinced, on the basis of many years' experience with end users and dp professionals, that the dynamics described here are behind some of the most important criticisms of dp commonly held today by users and dp professionals alike; first, we in dp are able to implement only a small fraction of the applications users want, and, second, when the applications are implemented, they frequently do not meet users' needs, necessitating a great deal of rework and upheaval to the business while the reworking is being done and the resulting bugs are straightened out. The shortage of dp professionals is serious and is expected to remain so for years to come. This is a compelling reason to improve the quality of applications development so that end-user projects do not have to be redone, and dp time is used at maximum productivity levels.

One IBM study suggests that improved dp and end user interaction can boost dp productivity by as much as 400%, getting the application up and running to the end user's specifications that much faster. So, while we are unquestionably dealing with a shortage of trained people, it is equally evident that narrowing the communications gap between dp professional and end user can go far toward easing current backlogs.

DP A MYSTERY TO USERS

Basically, this communications gap goes back to the earliest days of the computer. Unfortunately, dp has been seen by end users as a forbidding mass of difficult-to-understand technology, which could be made to serve their business needs solely through the efforts of a "new breed" of person, the dp professional, who was somehow magically imbued with all the requisite knowledge. Equally unfortunate, dp professionals themselves tended to believe this image. From one point of view, therefore, it might be said we're just dealing with the same old problem, but that would be a dangerous simplification - dangerous in that it could keep dp and end user management from appreciating the true dimensions of the current problem, and the steps that must be taken to solve it.

In the typical commercial establishment of 25 years ago, the person in charge of the computer operation was the financial officer, perhaps the controller. The dp manager reported to the controller. Whatever their backgrounds, they could achieve a meeting of minds without too much difficulty. The dp manager was running a set of well-defined applications, narrow in scope, applied to a narrow segment of the business. The company's customer, whether another business organization or a consumer, had superficial contact with the new technology, perhaps only through an invoice or an accounts receivable statement. When something went wrong, however embarrassing it may have been, it was easily resolved.

Today, we are dealing with end users who rely on terminals to interact directly with customers; with end users who rely on the system to assure that their customers' requirements can be met; in short, end users rely on systems to support people on the "firing line," those who are judged by the customers they gain or lose, or by customer complaints.

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Now, when the end user's system doesn't function properly, the reverberations can be heard all the way up to the ceo's office. There is a great deal more at stake, and if "blame" is to be apportioned there is plenty to go around for everyone.

Let's start with some basic definitions. The end user is the person - actually the only person - who can perceive, or confirm, that a given application will lead to certain benefits which can be defined and usually measured. He, or she, alone can make ultimate decisions concerning a given application, because that person alone has the immediate responsibility and the experience that can lead to sound judgments.

By definition, therefore, the end user must have the critical role in the decision to invest in the application, in its design, and in its implementation. The dp manager is a purveyor of technology, supplying a service for the money the end user will pay. He, or she, should be a consultant on the most effective use of dp technology in helping final solutions to business problems and needs, and the governing authority on such matters as data security and system recoverability. The dp manager should never be the person to decide the next application to be implemented; making implementation decisions is the function of the ceo. To the extent that the dp manager does make implementation decisions, it is usually by default.

434 In discussion after discussion we have found the issue is not what dp is all about, but what the business is about. The end user is not bothered by the cost of application development but by application effectiveness - the extent to which it delivers, or fails to deliver, the services that in turn impact customer relationships. The assumption, implied in the late 1950s, was that technicians "drove" the new dp technology. Today, that is not enough. Neither dp professionals nor the financial department "owns" end-user data; to the extent that both utilize it they are custodians. The "driver" today is the end user, and there can be no satisfactory services without successful dp-end user relationships.

SUCCESS STORIES CITED

The proof of the basic fact can be seen in successful application development projects. Among the heaviest early dp users were insurance companies, and perhaps it's no accident they were among the earliest to adopt the project team approach to applications development, with heavy end user involvement.

Until recently, even insurance companies with extensive dp experience shied away from "automating" group medical and dental claims handling. The data required is vast, each group contract written with an individual customer is separate and distinct, and the claims processing operation itself is complex. A medium-size insurance company based on the East Coast was among the first to break through the difficulties and develop a distributed claims processing application. The project leader was a headquarters claims manager, with working field

experience; the majority of the project team members were actual claims administrators; a working relationship was established with the dp department that enabled this first-time, highly customer-sensitive application to be installed on time with a level of success that saw end users eager to cooperate in follow-on applications.

An end user manager for a Southern newspaper utilizing an advanced computerized classified advertising system credits a good part of its success to his people's involvement in the system design. Testing an application system can take up to one-half of the dp organization's development resources, and a significant portion of that time is in redesign and retesting of user specs that were poorly communicated to begin with. Prevent the need for such rework, and you will make a significant impact on total productivity.

An end user coordinator in a manufacturing company found that so-called dp "overruns" were something quite different: they were actually the costs, in time and money, that resulted from the difference between the information the end user provided the dp department in the system proposal stage, and what the end user demanded of dp prior to considering the project complete. With a better understanding of dp requirements, and improved people interaction, the coordinator's end user systems did come in on time and within acceptable cost limits.

Similarly, managers at a New England bank that had upwards of 65 new applications in development every year found that increased analysis time devoted to the design phase of a project before actual coding resulted in much less test time and signoff difficulties at the end, with project dates being met. More and more, bank end users and dp people are speaking the same language.

Any number of additional examples could be cited. From long experience with both dp professionals and end users, I am absolutely convinced the most important single factor affecting applications development is how well the participants fulfill their roles. When dp managers are asked what problems they've experienced with development projects, they overwhelmingly (70% to 80%) respond: lack of proper user involvement. Statistics reveal the bulk of programmer/analyst time is spent on design, which is largely a matter of getting a good spec from the user - or, more importantly, getting it into test. "Test time" is largely redesign and recoding made necessary when user requirements are inadequately stated at the beginning of the project.

WHO TO NARROW THE GAP

The "bottom line" question is: what can be done to narrow the communications gap between dp professionals and end users?

Dp professionals should view and treat end users as clients who want services performed. They must focus on solving their client's real business problems.

Dp people should not discuss technical subjects with their user-clients. Most dp professionals simply take it for granted the end user must know about access methods, programming languages, operating systems, etc. Not true. The dp professional does not have to go beyond a few technical terms such as character, field, record, file, code, bug, debug. The end user wants to be told in basic English the same things any client must know: when the end product will be ready, its cost, quantity, and quality. In dp terms, quantity is capacity, i.e., the number of transactions in a given time frame, and quality concerns reliability and related factors.

End users should understand their project development roles in terms that are meaningful to them. Dp professionals should be viewed by themselves and their users as project members, not as antagonists dealing in an arcane art, capable of solving all problems with a wave of the hand or seeking to ride roughshod over the end users' operations.

To help both dp professionals and end users understand their roles, I have found an excellent device is using the analogy of building a house - or remodeling a kitchen, which really did happen. The house analogy is essentially foolproof. End users grasp their roles instantly; they understand they must specify, in the required detail, just exactly how they want the house built and what they want it to contain. Similarly, dp professionals understand their roles in providing guidance, advising on the practicability of different approaches, and the various tradeoffs.

Both groups understand it's only right and proper that a prospective home owner be required to sign a contract with the builder before the house is built, and only right that any changes will entail reopening the contract. It's also only right that the builder be held to the promised completion date, built-in features, quality and cost.

The house analogy works. End users and dp professionals understand it. It is successful in the effort to improve communications between dp professionals and end user clients.

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