Establishing Quality and Usability Benchmarks for Information Products

JoAnn T. Hackos, Center Director

**Introduction**

Traditionally, benchmarking has been defined as the process of comparing the performance of one company’s products with the products of its competitors. For example, benchmarking provides companies with a method for determining if semiconductors perform equally fast and accurately, if application software products include the same functions, or if one’s automatic camera focuses as quickly and accurately as the competition’s. Benchmarking also provides a method for studying internal processes to ensure that competing companies operate assembly lines as efficiently, produce the same output from the same machinery, or process paperwork as efficiently. Benchmarks are the baseline measurements, the numbers to beat.

With traditional benchmarking, most information development organizations attempt to find quantifiable characteristics to measure. While it is possible to do benchmarking without metrics, in most instances we find it easier to justify product changes to management when we can demonstrate through quantitative measurements that a problem exists.

What then does the benchmarking process mean for information products? How do we compare our publications with those of our competitors? How do we define quantifiable characteristics that predict our publications’ success or define their level of quality? What is the relationship between quantifiable characteristics and the ability of our publications to meet the needs of our customers?

The danger for publications benchmarking in relying upon quantitative measures is that characteristics of documents that we can easily measure may be trivial in terms of their impact on the user.

Recently, an information developer informed me that the publications manager in her company had been asked to measure improvement in the quality of their publications. The manager had announced that the entire department would concentrate during the next year on quality improvement. To measure their improvement in quality, they would attempt to decrease the number of typing errors in their publications.

In an effort to select a benchmark for the company’s announced quality improvement efforts, the publications manager had identified a publication characteristic that could be easily measured. Unfortunately, while improvements to the selected benchmark, the number of typing errors, will be easy to quantify, it will be difficult to measure the effect on the customer. As a result, the publications manager will be hard pressed to prove that eliminating or reducing typing errors will improve customer satisfaction with the documentation, decrease the company’s cost of doing business, or increase the company’s sales.

It’s not that we believe that publications are not improved when they have fewer typing errors. Unfortunately, unless a typing error is so egregious that the intended word is obscured, it doesn’t make much difference to the user’s understanding, productivity, or performance. Typing errors, while embarrassing to the writer and the publications department, make little difference to customers who are...
From the Director

JoAnn Hackos

Dear Friends,

The SingleSource 2000 conference attracted more than 200 information designers and developers to Chicago in early August. Let me thank all of you for making the program a success by attending yourself or sending your staff members.

To close the conference, the speakers joined Ann Rockley and me in an open forum with everyone who did not have to leave for the airport (and more canceled flights). What amazed me most at the forum was how strongly the conference’s main theme had gotten across: It’s the content, not the tools.

All of the speakers and many of the listeners underscored their presentations and questions with a focus on being certain that the content is right. They discussed restructuring their information, finding ways to minimalize the information, breaking the strangle hold between authoring and publishing, and re-establishing their connections to their audiences. They warned again and again that technology is not the whole solution but only a part of the solution. They noted the danger of selecting tools too early or expecting tools to do the work. We heard that the real work of single sourcing is content design.

I’ve been surprised and pleased by the exploding interest in single sourcing and the seriousness with which information managers approach the task. If we have ever been on the brink of a paradigm shift in technical communication, it is now, and single sourcing is at its heart.

The move to desktop publishing which dominated the 80s simply allowed us to transfer work done by outside resources (typesetters and printers) to the information developers inside our organizations. Desktop publishing did not change the nature of the information we delivered to our audiences.

The move to online help systems and CD-ROM delivery which dominated the 90s has had, in some cases, an effect on information design. Following Microsoft’s lead, some information developers began to simplify procedures so that they were more accessible to the user immersed in a software application. Information developers began to understand that brevity is firmly in the camp of usability. Others, unfortunately, looked for the easy way out by delivering the same content and format from their print documents in electronic format. We continue to note the dominance of the ubiquitous PDF on CD-ROMs and on the Web.

Unfortunately, neither movement seemed to have much effect on the development of content. As I mentioned in the August issue, many information developers remain quite happy writing about subjects they do not fully understand for audiences they have never met. Then—along comes single sourcing, driven by the need to reduce costs and increase efficiency.

The single-source movement has been strongly influenced by the move to global markets and the subsequent need for the localization and translation of interfaces and information. The single-source movement has found even more motivation in the renewed stress on time-to-market initiatives, pushing information developers to develop content faster than ever, under shorter deadlines, accompanied by delivery mechanisms that can be instantaneously changed. Faster time-to-market means that we no longer have the leisure to prepare fastidious print deliverables. We are being forced to find ways to automate publishing tasks and recognize, finally, that customers want content more than format or finesse.
Single sourcing does not perforce require that we redesign our information or pay any more attention to our audiences. However, it does provide a substantial incentive to do so. The better structured the information, the more minimal the writing style, the more likely information content units can be reused. The higher the percentage of reuse, the more efficient, less costly, and faster does our information development become. Redesign for maximum reuse not only reduces development costs and time-to-market, it reduces the cost of localization. Reusable content units, written in a tight, consistent style are more receptive to the effective use of translation memory systems which significantly help reduce localization costs and time.

Nonetheless, all this focus on efficiency does not necessarily mean that the audience is better served by our information, even though readers are known to appreciate consistent structure and style, less verbiage, and greater consistency. Single sourcing also provides an opportunity to increase audience effectiveness. If we can increase our efficiency, we can shift the preponderance of activities away from publishing tasks toward audience and task analysis, usability, and content management.

We’ve spent too many of our resources during the past 25 years (which saw a tremendous increase in the number of technical communicators and the resources devoted to technical communication) on publishing. Our resources have gone into desktop publishing, online help tools, and multi-platform delivery of identical content. Now we have an opportunity to recover lost ground by turning our focus toward the user experience and the development of effective and minimalist content. We owe it to our audiences to stop writing documentation and go to work for the user. Let’s use the gains we can make by single sourcing to become effective communicators once more.

JoAnn

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concentrating on getting the information they need to do a job.

This publications manager selected typing errors as a quality benchmark because the number of errors is very easy to determine. More meaningful benchmarks, such as the usefulness of the document in facilitating learning, are much more difficult to measure.

The root problem, of course, is confusion about how to measure the quality of information products. Should we use quantitative measures that lead us to count the number of typing errors? It’s tempting to select quality benchmarks that are inexpensive to measure and easy to correct. Or, should we attempt to find more meaningful measures, even if they are more difficult to analyze? We must recognize that the more meaningful the measure, the more important it will be to the publication’s and the product’s success.

As part of an organization’s initiative to provide higher quality goods and services to its customers, information-development organizations are being asked to undertake quality initiatives and find ways to improve customer performance and satisfaction. These initiatives have left many information developers and their managers stymied. Just how does one measure the quality of information products? Do we concentrate on factors that we can easily and inexpensively quantify? We can certainly count spelling mistakes. We can eliminate typing errors and announce to the world that we have improved the quality of our information products. If we decrease the number of typing errors per hundred or thousand words, have we not increased quality? In one small way, undoubtedly we have increased our credibility in the eyes of our peers and, perhaps, our customers. However, we must also ask: Is the resultant increase in quality worth the cost of measuring and correcting the problem?

Many readers may have noted that in the past few years the number of typing errors has increased dramatically in books produced by
major publishing houses. Could it be that book publishers have decided that the cost of decreasing the number of typing errors is too high in relationship to its importance to readers and that readers will continue to purchase their books whether they have some typing errors or not?

We hope that the managers of publishing houses have conducted a value analysis to help them decide how to measure the quality of their publications. In a value analysis, we compare the cost of performing a task (such as thorough proofreading) with its relative value to the customer. If it is more important to the customer that the information we provide be accurate than that it be typographically perfect, then we should put more resources into guaranteeing accuracy than in proofreading. And, if we have time to perform only one quality-assurance task, that task should be accuracy checking rather than proofreading.

Complicating the task of analyzing value is the need to compare our own quality values with the values of our customers. Most information developers value the mechanical correctness of their publications. They dislike typing errors. Typing errors make them appear less competent to themselves and to their peers. They argue that typing errors can cause problems for readers. Misreadings and resultant misinterpretations might have potential negative economic repercussions for a product manufacturer or service provider. Only by demonstrating the potential economic repercussions of typing errors, however, can communicators effectively argue for the value of performing careful proofreading.

In many instances, communicators find that making an economic argument, a business case, for the activities they perform is difficult. It may be difficult to prove that someone made an unnecessary customer-service call or refused to buy the company’s products because of typing errors. In fact, making a business case becomes more difficult the farther the selected characteristic is from having a direct and noticeable impact on the customer’s needs and the company’s costs and profits. For that reason, we focus in this discussion on establishing quality benchmarks for our publications that are closely related to customer’s needs.

**Quantitative Versus Qualitative Benchmarks**

To relate publications benchmarks to customer needs requires the ability to quantify the relationship between a publication’s quality and a customer’s requirement. For example, to quantify a publications benchmark, we may look for a relationship between an excellent table of contents and index and the ability of customers to find information they need quickly. We may discover that a table of contents containing two levels of informative headings and an index with three levels of index entries, no more than two page references per item, and the frequent use of synonyms as cross-references, permit customers to locate the answers to their questions in two minutes or less. Not only can we test for this quality, but we can show the relationship between accessibility and a reduction in customer service calls.

A quantifiable measurement of this sort is not only testable but we can associate with it a potential for cost savings. However, benchmarks need not be quantitative. Although most traditional benchmarking has focused on quantitative measurements, benchmarking can include qualitative measurements. If industry experts (pacesetters) agree that our product is easier to use than a competitor’s product, we will have a positive perception to communicate to prospective customers. In this case, the benchmark is based on subjective opinion; nonetheless, it is just as relevant to our success in the market as quantitative benchmarks (see What is a benchmark?).

**Measuring Customer Satisfaction with Publications**

Measuring customer satisfaction with products and publications has long been used by companies interested in quality benchmarks. These companies regularly conduct customer surveys by mail, telephone, and customer-site visits. They ask customers for their opinions about the products and services provided. They often provide the customers with a rating system that differentiates among customers who are...
In addition to asking our customers to rate their level of satisfaction with our publications, we can institute other methods of measuring the degree to which our publications appear to help customers accomplish their objectives or solve problems. Quality benchmarks that relate to customer satisfaction include:

- Counting the number of complaints from the customers about the information products they use.
- Counting the number, type, and complexity of customer requests for assistance when the information they need is available or should have been available in the publications.

To begin a quality improvement program, information developers can request that those who answer customer calls record complaints about information products and problems in using information products, as well as the total number of calls asking for assistance which might have been handled by better information products. A high number of complaints indicates significant problems with the publications. A decrease in the number of complaints should indicate an increase in publications quality.

In addition to specific complaints about publications quality, you should benchmark the number and duration of calls for assistance, as well as the type of questions that customers ask (see Customer support calls decrease significantly).

**Measuring Customer Complaints and Calls for Assistance**

Customer problems arising from information products may be gathered from a number of sources, but the chief sources of complaint data are calls to customer service and complaints registered informally through sales and field support personnel. Customers who actively register complaints about information products have frequently encountered serious problems in accessibility and usability.

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QUALITY AND USABILITY BENCHMARKS

Minimizing Information Increases Customer Performance

In a recent study, we helped a client discover that the customer for its Quick Install manuals did not need 90 percent of the information being provided. The majority of the customers were internal customer engineers who needed a few key bits of information to install the product successfully, information that could be provided with a single page of documentation. The 25- to 30-page Quick Install manuals exceeded customer needs and, consequently, were not used. By reducing the installation instructions to a single page, the information developers in this organization produced documents of higher quality. In a study of customer satisfaction, the Allen-Bradley Company reported that customer-service calls decreased from 50 a day to 2 a month after new documentation was designed and published.¹

We particularly recommend that information developers conduct benchmarking studies that relate to customer-service calls because of the obvious connection between decreased number and duration of customer service calls and the cost of servicing customers. If a company receives 100 customer service calls per day at an average cost of $25 per call for 300 days a year, a reduction of 10 percent in the number of calls means a potential cost savings of $75,000 a year. A strong economic argument for decreased costs associated with improved information products is one of the most convincing arguments to make to senior management.

Meeting Customer Expectations

Many information-development organizations design user documentation in a vacuum. Information developers lack direct access to customers, have little opportunity to conduct customer studies, and often must guess, based on their own experience and learning styles, the type and extent of the information customers need to accomplish their objectives and solve problems. As a result, they may fail to meet customer expectations.

If information products fail to meet customer expectations, the result will be increased calls to customer services, increased customer complaints about publications, reduced referrals and follow-up sales, and other product-specific problems. By studying customers and analyzing their needs in detail, the information-development organization can better decide the minimal set of information that will be useful. In the past, we have often felt compelled to include all possible information in information products, hoping that some of it would help the customer. We can no longer afford such a “supermarket” approach to document design (see “Minimizing information increases customer performance”).

By avoiding a supermarket approach, we can reduce publications costs. By providing just the right information to our customers, we reduce the volume of information that must be created, reviewed, printed, translated, packaged, shipped, and more. We also increase the accessibility of the information for the customer by eliminating information that is not needed and highlighting the information that is.

However, to target our communications effectively, we need to know much more than we tend to know today about who our customers are and how they use information. We need to visit customers in their “natural environments,” observing their use of information when they are learning a new task or remembering how to perform a familiar task. We need to study how they use information in a crisis or when they are “getting started.” Our initial visits provide a benchmark for improvements in publications quality. We discover areas where information delivery and understandability might be improved. Once we establish our initial benchmark of customer needs, we can subsequently measure our success in improving our publications through return visits and new observations.

Setting Performance Benchmarks through Usability Testing

While we can gain considerable information about customer requirements from surveys, one of the most comprehensive methods we have available for analyzing the success of our information products is usability testing. During a usability test, we directly observe customers consulting the documentation to learn and use the product. We can discover where and why they have problems using and understanding the documentation, which enables us to decide upon ways to change the documentation and eliminate the problems.

Usability testing is a powerful benchmarking tool because it allows us to establish measurable performance objectives for our documentation. In the development of a

usability test plan, we must clearly state measurable hypotheses about the performance of the user in completing useful tasks. For example, we may hypothesize that a typical user should be able to install the hardware in 30 minutes by following the instructions in the documentation and the labeling on the hardware itself. If typical users are unable to complete this task in the required time during the usability test, we will use test observations to discover why the task took longer than anticipated and find ways to shorten task-completion time by providing better instructions.

In addition to studying our own documentation and products in terms of performance hypotheses, we can also conduct benchmarking usability studies of our competitors’ documentation and products. If we discover in a comparative usability test that our competitors’ products take less time to install, then we have a benchmark upon which to improve.

At Comtech, we conduct competitive usability tests to help our customers learn how to improve their products’ performance in terms of customer usability. The most difficult aspect of these tests is to uncover the characteristics of product and documentation that impede user performance and encourage errors. Once we have thoroughly and carefully analyzed test results, we can make useful recommendations for improving product and documentation to meet or exceed competitor performance.

In measuring customer performance on specific tasks through usability testing, we concentrate on several important benchmarks:

- time to complete the task successfully, including accessing the documentation
- number and nature of errors made in completion of the task
- number and nature of requests for help in recovering from errors
- the degree and accuracy of the conceptual understanding that takes place as a result of completing the task
- the customer’s satisfaction in performing the task after it is completed

Interestingly enough, when we attempt to establish benchmarks about time to complete tasks or number of errors for our test hypotheses, the information developers frequently can give us little benchmark information. They often do not know how long a task should take when performed by either a novice or an expert. We then use the usability test to set the performance benchmark early in the information-development life cycle. With an early benchmark in place, we can perform iterative tests to measure improvements in the quality and usability of the documentation.

When we discover that documentation experts have often not established usability objectives for the documentation, it may indicate that performance and usability objectives have not been considered in the design of either the product or the documentation. This lack of performance benchmarks points to a considerable problem we face in improving the quality of customer documentation (see Trainers need to meet performance objective).

Those of us involved in the design of documentation often have not had the same degree of accountability for the performance of our information products. As a result, we are often surprised when we are asked to define measurable performance objectives for usability testing.

We find that the very act of preparing a test plan for documentation often leads information development, as well as product design groups, to reevaluate their design processes. Information developers often begin to think differently about their processes of preparing documentation when they learn that their users must perform tasks successfully and within acceptable limits of time and error rates. Thus, benchmarking user performance can immediately have a significant effect on the perceptions and, we hope, the development processes of information-development organizations.

**Studying Customer Productivity in the Workplace**

While usability testing is a powerful tool for measuring task performance and establishing performance benchmarks, it generally exam-
ines user performance in a laboratory setting rather than in a real workplace environment. A laboratory setting that mimics the work environment is appropriate for studying individual task performance and can certainly be designed to provide substantial information about learning and use, but direct study in the workplace also allows us to establish comprehensive benchmarks of customer performance unavailable in a more cloistered setting. Perhaps one of the most valuable measures for technical information is referred to as “mean time to productivity.”

Mean time to productivity refers to the time it takes the average user to learn how to use a product effectively and to experience the productivity gains promised in product marketing. For example, a software manufacturer may contend that the productivity of an architecture firm will increase if they acquire a computer-aided design system to prepare their architectural drawings. In evaluating such a product, the buyer is, or should be, concerned with the amount of time and money it will take for its staff members to learn to use the product effectively. Will they have to send staff to training classes? Will staff be able to learn on their own? Will staff take substantially more time to complete their work during the learning process?

User-interface design, documentation, and training are the primary tools that support the learning process among the customer’s staff. If the learning time is too long or the productivity gains unacceptable, the product’s reputation may suffer. By studying the use of the product and its documentation in the workplace, information developers and product designers can establish benchmarks for mean time to productivity and monitor the customer’s process to ensure that the benchmarks are being realized after the new technology and documentation are introduced.

Productivity benchmarks can be established through customer-site studies as well as through laboratory usability testing. The customer-site studies may, however, provide more realistic measures of the time it takes for the user to learn the product and master its capabilities. A customer-site study might be designed to develop an initial benchmark of customer characteristics at the time the product is introduced. Subsequent analysis of the learning process and its success or problems will further provide information about the customer (see Percentage of product use increases).

Considerable attention has been paid in the press to the productivity gains claimed by the computer industry for the office workplace. It has been argued that the computer has not increased productivity in the workplace to the extent promised. As information developers, we should be interested in discovering whether or not our new products actually improve productivity over previous manual processes or other automated systems. If they do not, we have an important challenge in terms of user performance objectives.

Measuring Customer Mistakes

In some instances, particularly when computer-based products are being used internally by company staff members, it may be possible to record types and numbers of errors made by users. In fact, we may even have opportunities to record errors made by customers outside our information-development organizations. Software systems can be developed that record all keystrokes or mouse movements made by users and permit the analyst to “play back” the users’ actions. Through a careful examination of keystrokes, information developers may be able to discover the types and numbers of errors made by users. In particular, they can measure the decrease in keystroke errors made following a learning period with a new system to determine the effectiveness of the interface and documentation.

In measuring mistakes made by customers, we may be able to analyze

♦ patterns of use of paper and electronic documentation
♦ problems in retrieving information from online help or electronic documentation systems
♦ electronic forms that are completed incorrectly
problems in understanding the content of the documentation that lead to performance errors

Using Expert Analysis
To enhance data gathered through direct studies of information users in the laboratory, in the workplace, or through surveys and interviews, information-development organizations often employ the services of documentation experts to evaluate documentation. Such expert analysis is referred to as heuristic evaluation (see What is heuristic evaluation?).

When documentation experts perform a heuristic evaluation of documentation, they often provide a checklist or description of the criteria they have used to examine the documentation and a complete report of their findings and recommendations. Document designers may then use the findings and recommendations to make both immediate and long-term changes in the information products.

The success of a heuristic evaluation depends upon the experience and expertise of the evaluators. The more they know about the effective design of documents, the better the evaluation is likely to be. Evaluators who have extensive experience performing usability tests of documentation may be the best prepared because they have experienced the correlation between user problems and specific documentation flaws.

While significant in examining the details of a large sample of documentation that would be impossible to evaluate through usability tests or workplace studies, expert heuristic evaluation has limits in its usefulness. Experts can observe only the external characteristics of a technical document—page design, organization of information into chapters and sections, adherence to standards and guidelines, sentence structure, and more. Experts cannot determine if the information contained in the documentation is accurate or appropriate for the users. Experts are not users and cannot duplicate many of the performance problems users experience trying to use and learn from the documentation.

In addition to examining your organization’s documentation products, expert evaluators will also be able to conduct analyses of your leading competitors. Such competitive evaluations can provide useful benchmarks from which to begin a documentation improvement process in your organization. If experts find your documentation to lack important usability features available in your competitors’ documentation, you have incentive to change.

Using Usability Inspections
In a heuristic evaluation, experts bring a rich source of experience and knowledge to the evaluation. This background also allows them to weigh the importance of individual problems in a particular publication with other characteristics of that publication. An expert might decide, for example, that a high-quality index is less significant in a very brief document that includes other accessibility tools than in a long document that is poorly organized.

What an expert evaluator cannot tell in such a study, however, is if the index terms selected are the best terms for the user community. Without intimate knowledge of the user community, the expert cannot provide information on the ultimate usability of the index or other document characteristics. Expert evaluation provides benchmarks only in terms of observable document characteristics, not in terms of performance objectives. It is possible, unfortunately, to have a document that meets all observable documentation standards and still is not useful for its audience.

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What is heuristic evaluation?
In a heuristic evaluation, experts in document design use their experience to judge the potential effectiveness of a documentation library. The expert judgment becomes a benchmark against which documentation improvements may be measured.
A few years ago a major manufacturer in the US sponsored the development of a software tool to help publications information-development organizations determine the quality and usability of product documentation. The program consisted of a set of questions that reviewers used to guide their examination of a finished document. Answers to the questions, a series of choices that rate the success of a document in meeting particular usability characteristics, were then fed into a software package. The software contained an algorithm based upon expert evaluations of documentation characteristics. The output of the software was a report rating the document in several key areas, including ease of access, task orientation, index quality, graphics, heading levels, and others.

To prepare the set of questions, the range of answers, and the weighting system used in the software, the designers solicited the evaluations of experts in judging the success of sample documents, conducted usability testing on particular document characteristics, and studied the relative importance of the characteristics designated as critical for high-tech documentation. Behind the metrics, therefore, is a set of guidelines familiar to most experienced information developers. Communicators know, for example, that manuals with indexes are more useful than manuals without indexes, that task-oriented headings help users find information, and that illustrations add to the usefulness of most manuals, especially for visually oriented users. These guidelines and standards were incorporated into the software. Such measurement software, like the guidelines and documentation standards published by many corporate information-development organizations, provides a set of benchmarks for information developers.

Unfortunately, as with heuristic evaluation, it is possible to “score high” in the measurement software and still fail to meet the needs of the users. The measurement software addresses easily observable characteristics, such as the number of index items, the ratio of headings to text, the presence of task-oriented information, and the use of examples and illustrations. The expert evaluator may take into account similar characteristics that are observable on the surface of the document design. Such observable characteristics are important aspects of good design. Documents that fail to demonstrate these characteristics are unlikely to be satisfactory to users. We know from observations and experience that many users find information more useful if it is task-oriented, heavily illustrated, well indexed, and full of good examples. Thus, the processes of expert evaluation and guided inspections of finished documents can ensure that the technical communications show no known usability defects.

Nevertheless, documents can pass inspection and still be unsatisfactory. They can contain errors in the accuracy of the information, be written at a level inappropriate for the users, contain examples that are too trite or esoteric, or be organized in a way that makes it difficult for users to find what they want. To the extent that expert evaluators or document inspection teams are not like actual users, they may miss significant problems with the documentation that will not show up until the documents are used by actual users in real situations. We have all known documents that look great, pass all the technical reviews, and are prepared with great care by talented designers and writers. Yet, the users of these documents find them impossible to use, full of misinformation and misleading advice.

While we should continue to include expert evaluations and usability inspections as part of our quality and usability metrics, we must be aware of the limitations of these techniques in finding the most egregious usability errors. Not until we test our documents with real users will we learn about the show-stopping problems that we never dreamed existed.

Referring to References in Other Publications—Technical Reviews
For publications in some industries, especially the computer hardware and software indus-
tries, reviews in industry publications (magazines, trade reports, and others) may provide a tool for benchmarking. In many industry publications, technical manuals represent one category that is rated as part of an overall product review. For example, when a magazine reviews accounting software, the reviewer may include a rating of the documentation provided. Such a reviewer’s rating provides a point of comparison among competitors’ documentation that can be used as a potential benchmark. If your organization’s documentation is rated lower than the competitors’, then you can act to improve your rating.

Not only may your documentation be rated in a table comparing features and functions of competitive products, the reviewer may choose to include an analysis of your particular documentation. In one case, when the product we had documented won a “product of the month” award, the full-page review article about the product included a discussion of the “first-class” documentation. There is nothing like a very favorable mention by an independent reviewer to convince your management that you are doing an excellent (or a not-so-excellent) job.

For the most part, product reviewers rate documentation on the basis of the presence or absence of certain features and functions. Reviewers scan for tables of contents, indexes, glossaries, illustrations, error messages, and other criteria that are easy to identify.

In standard product reviews of this sort, criteria are often published that explain the features that the reviewers are looking for in the documentation. By reviewing such a criteria list, we learned in another case that reviewers of statistical software valued the presence of an appendix that listed the equations used in the statistical calculations. Without the comment in the review criteria, we might not have included such an appendix in the software documentation we were authoring at the time.

Reviews, however, do not ordinarily evaluate either the product or its documentation on usability. In fact, many users are amazed to read favorable reviews of both products and documentation that they find difficult to use.

To better serve their readers’ interest in usability, in addition to features and functions, a few of the leading software product magazines have instituted competitive usability testing. That means that they subject all the competitive products to the same usability tests so that they can better report on this significant aspect of quality. The test criteria, like the criteria for the more subjective competitive review articles, are published and can be a source of information to guide development strategies.

A positive documentation review, especially one based on usability testing that includes the documentation in the test, is a welcome independent judgment and potential benchmark measuring the quality of your work. However, even a negative review can provide a valuable basis for improvement. Like any quality metric, a reviewer’s measure is useful. Sometimes, it leads to specific improvements like adding an appendix on equations or developing a better index. In other instances, it can be used to support other quality measurements to determine exactly which attributes of the technical information need to be improved.

**Applying Industry Standards and Guidelines**

Many of the quality benchmarks and metrics discussed above take place during the information-development life cycle or after the product has been released to the customer. They allow us to make measurements of what customers need, how satisfied they are with our products and services, and the extent to which they are experiencing problems. Many information-development professionals hope, however, that they should be able to generalize from the collective studies of customers to practices and standards that they can apply to documents during development.

We would like to be able to claim that good practices in information design and writing will make a difference to our customers. For example, we believe that customers prefer step-by-step, task-oriented instruction to descriptive information about the product or process. Usability testing results often demonstrate that customers have difficulty discover-
ing what to do from long descriptions and perform more effectively when they can follow a set of well-written, briefly stated steps. In customer satisfaction studies, customers often state that they prefer to use simple step-by-step instructions rather than reading long, detailed explanations. Consequently, many information-development organizations have put standards in place that require their writers to create task-oriented rather than descriptive text.

Once such a standard is in place, we can inspect a draft text to ensure that the standard is well understood and implemented. The usability editor can examine the organization of the text to ensure that user tasks are prominent in the table of contents and heading levels. The review teams can ensure that the task-oriented instructions are complete and correct.

With a standard in place and an inspection method available that ensures that the standard is being implemented, an information development team can create an in-process quality metric. One might measure a writer’s document plan, deciding if it is organized according to a thorough understanding of user tasks (a top score of 1) or if it needs to be revised to meet the standards (a second-level score of 2). During a usability edit, the editor might also rate the writer’s success in producing a task-oriented text, using a 1- or 2-point system or a more complicated scoring method. During the review inspection, a similar scoring system might measure the success of the document in meeting the standards.

A quality metrics system implemented through editing and reviews might even become an integral part of an individual’s performance evaluation. However, it is vitally important that the evaluation system measures qualities that are truly customer driven. We have spent too much time in the past measuring only what we believe is important to a document. We look at issues such as grammatical correctness, accuracy in desktop publishing techniques, or attractiveness of layout. Unfortunately, we often end up measuring and evaluating what we value and neglecting what the customers really believe is important to achieving quality. A judge in a local technical-manual competition once eliminated a manual from contention for an award based solely on a single typing error. In all other respects, the manual appeared to be a well-designed and highly effective document. Such concentration on personal or “writer”-related values often makes the interests of information developers appear trivial and costly to our more business-oriented management and certainly to those customers whose needs are not being met.

In short, we need to ensure that what we measure is relevant and high on the customer’s priority list. We need to avoid measuring something because it is easy to measure. When we choose to measure a quality and establish a benchmark, we make a very strong statement about our value system. It has been a truism in quality information-development organizations that “what we do not measure does not get done.” We need to be extraordinarily careful that we choose to measure the right things.

Who is Responsible for Quality?

Everyone in an organization should be responsible for the quality of the work products they create. Individual information developers must understand the quality and usability requirements of the information they create for customers. Project managers are responsible for overseeing the work of individual contributors to ensure that company quality standards are enforced. Department and other functional managers are responsible for ensuring that their staff members have the training, resources, and support they need to achieve the level of quality demanded by customers and upper management. Without all levels of the organization working together to achieve quality, the efforts of small groups will often go unrecognized and unappreciated.

Quality and usability benchmarks enable us to focus on what our customers believe to be important about our publications. They provide us with both a place to start improving quality and a method of measuring the success of our efforts. Any publications organization that is being challenged or challenges itself to become more responsive to user needs must institute a benchmark process. Without an initial measurement, few real gains are likely to occur. We are much more likely simply to change something about the documentation rather than to make it more successful in meeting user needs.
The three managers interviewed expressed a stark contrast of views. Steve Murphy is currently working as a contractor but has experience managing contract employees at Digital Equipment Corporation (DEC) and being a manager at a contract agency. Lori Fisher is an information-development manager at IBM’s Santa Teresa Laboratory in Silicon Valley. Byrne Smith at Compaq Computer Corporation instituted a new approach to using contract help in the past few years that has required considerable flexibility and innovation.

Jumpstarting Your Staff—Steve Murphy, Ibis Training and Writing

Steve Murphy has worked on every side in this partnership: functional manager employing contractors, a contractor, and a contract agency manager. When he managed at DEC, he often used contractors to add a skill he didn’t have in his group. So, for example, if he had an immediate need for a new tool, method, or technology, he would bring in a person with that expertise for the project. He found that, after a while, his staff welcomed this person because they had the experience to share. Their expertise enhanced the reputation of the department and gave the “regular” employees an opportunity to develop in areas where they were inexperienced.

Steve grew talent in house but would never place greenhorns in a spot where their inexperience could harm either their careers or their projects. However, he took care to ensure they got the experience because “you’re either going to develop them or lose them.”

Both as a contractor and a contract agency manager, experience and diplomatic manner helped smooth over problems and meet vendor needs. One of the hardest parts for agency employees is that they have no true “home” and they have to be very self-reliant. They also have to be able to walk in, assess the situation and create a solution that meets the client’s cost, schedule, and quality needs. In order for the contractors to be successful, Steve says, they need to be like “commandos” able to hit the ground running. They also have to understand whether their project is tactical or strategic and adjust their approach and time commitments accordingly.

Steve says that there are two ways to effectively use contractors. First, where you have legacy information or information that is not time critical, put contractors to work updating it, especially in cases where the documentation follows structured writing guidelines that are easy to learn. These projects are ones where internal employees won’t grow and you are in danger of losing them.

Second, put contractors on challenging, leading edge projects to protect and instruct internal employees. “You can really leverage these highly skilled and high-energy people, not just for their skills but also for the diversity they add to your staff. In addition to their project work, find ways for them to interact/mentor internal staff members. For example, have them present topics at staff meetings that showcase their background and unique qualifications. These meetings can be incredibly valuable to the internal staff because they open new vistas of career development.”

Steve’s final point was that you get what you pay for. If you think that you are going to pay less for contract help in the short term, you are wrong. Highly qualified candidates make top dollar and they may be, in fact, more expensive per hour than your best writers. However, they can complete the job faster than less experienced and less expensive contractors and they typically get it right the first time. They also provide flexibility and diversity of skill, which augments your internal staff and places your department in an overall stronger position to meet new challenges.

Covering the Peaks—Lori Fisher, IBM

Lori has often had contractors and agencies augmenting her staff but never more than about ten percent. In her view, if you exceed that percentage, managing the contractors and other impacts on full-time staff begin to reduce or eliminate benefits. Her situation is
**Giving a self-contained project to an outside agency**

Lori Fisher commented that she is cautious about yet another model of contracting:

> If you are thinking about giving a self-contained project to an outside agency with the idea that you will manage the product after initial implementation—don’t do it. Our experience has been that while the initial information product was fine, ongoing maintenance was almost impossible because all the project knowledge was at a vendor—a vendor whose management and staff may have turned over in the interval. I know that my operation may be unique but we have found that augmenting rather than replacing core staff works best for us.

Typical of many high-tech organizations, in good times, she can’t hire people fast enough. To ride out the lean times, she avoids overhiring to minimize the need to reduce staff later. She uses contractors and agencies as a hedge.

Lori says that IBM’s philosophy, in general, has been when reasonably feasible, to grow expertise from within rather than hire advanced skills on a short-term basis. Lori uses contractors or agency people in the way that Peter Block describes as “an extra pair of hands.” Lori states that she “thinks it is short-sighted and risky to rely on contractors for specialized expertise. It is a complex issue that feeds into building and maintaining a strong team and encouraging full-time staff to grow and develop their skills.” Lori also notes that IRS guidelines create practical limitations on the use of contractors and agencies and that IBM has been particularly rigorous in meeting these guidelines.

Lori does differentiate between contract/agency employees and consultants. Bringing in the latter can help your organization get a jump on new technology or trends. However, consultants have a well-defined area of expertise and are generally self-managing. Contractors or agency employees require more time and effort in terms of coordination with the rest of the team and sometimes need productspecific training. Lori relies on project leads to help address such needs. The project lead comes up with a project plan and, together with Lori, determines how many resources and which skills are needed. The routine or self-contained tasks are most often performed by contract employees. The team lead has operational control over the project and helps other team members with deliverables and negotiation.

In order to get quality people at short notice, Lori recommends having a close working relationship with your procurement department. The procurement specialists are the ones who write the contract requests and monitor the vendor relationships. Spending time with procurement always pays off in the end because you will be able to get quality support in house faster if the procurement specialist understands your needs.

In the highly volatile Silicon Valley climate, finding people with the right mix of technical skills, tool knowledge, and self-starting attitudes can be difficult. The IBM team leaders pinpoint specific training contractors may need, either on tools or products. However, because of competition and other factors, Lori has not found that the contract agencies are able to provide experienced people who can be productive on day one, which is another reason why she tries to keep the percentage of contract-to-full-time staff at ten percent or lower.

Occasionally, a former contractor or agency person may apply and be hired for a full-time slot at IBM. What is surprising, but probably shouldn’t be, to some former contractor employees about this transition is that contractor employees actually get more time to devote to project work as that is the specific service they provide; some people therefore find it difficult to transition into the expanded responsibilities of a full-time employee (see *Giving a self-contained project to an outside agency*).

### Integrated Vendor Partnership—Byrne Smith, Compaq Computer Corporation

Compaq Computer Corporation changed a number of its strategies in the mid 90s through merging with and acquiring other businesses. On the plus side, the products these acquisitions brought in revitalized the company. On the down side, the influx of new products and markets caused a huge amount of work for the information-development departments inside the company. As Byrne Smith says, it was like “changing a tire at 55 miles per hour.”

Early in 1998, the information-development management team started to do resource and other planning to handle all of the work. The focus was then and still is today on the customer. How could they produce quality, accurate, on-time information products for their customers—often when they are still learning who their new customers are? At the same time, they didn’t want to go through the ramp up/layoff cycles that can be so harmful to staff morale and career growth.

The information-development departments became hybrids—half full-time employees and half contract-agency employees. Byrne and his colleagues worked to identify agencies that specialize in information development. They decided that, ideally, they would develop several strong vendor relationships over a period of time. They were looking...
for a commitment from the vendor to find and retain people who could easily move in and out of Compaq’s complex setting. Compaq’s commitment was to create a new process that weaves together a fabric of employees and contractors who create outstanding information products. (See Working within IRS guidelines).

Compaq also decided that they wanted a “turn-key” operation, one where they could issue a statement of work and the contract agency would bid on it. Once awarded, the agency manages the project from documentation plan through delivery, including working with internal departments on graphics, localization, and information-product production. Byrne comments that they are engaged in an experiment. To develop information products in the time available and satisfy customers, they could not manage the work by “staffing up” internally.

To create an experiment that internal people could support, information-development managers had to demonstrate the benefits. Byrne and other information-development managers helped people understand that contracting adds stability to their jobs. Additionally, it allows them to increase their leadership, training, and communication skills, making them more versatile and valuable over the long term.

Contracting changed writer and other specialist roles. Employees moved to project management from writing, and the transition has gone well. And, as the experiment unfolds, the parameters have changed. For example, the initial plan was to have three main vendors that bid on every project. In practice, this became unworkable. Now each vendor is matched with a set of product lines and internal project leaders, which allows them to get the in-depth technical and process knowledge they need to offer a “turn-key” solution.

Another change is in the bid/estimating process. Compaq outlines the project scope, and the vendor returns a statement of work. The statement of work is flexible; if the scope changes, so does the statement of work.

As any good manager would, Byrne is looking for ways to streamline the process further and continue to improve time-to-market and other productivity and quality factors. For now, though, he finds the contracting solution keeps the customer at the center of activities, provides stability and opportunity for full-time staff, and increases productivity and consistency through the use of a pool of experienced agencies.

**Conclusion**
Lori and Byrne are at opposite ends of the spectrum with regard to contract employee use because their organizational structure and goals align with their differing corporate visions and product types. Lori’s employees document large database products whose customers run large information systems departments. The writers need to become deeply expert about the products and the customers to be successful. Byrne’s division at Compaq is producing information products for their industry standard servers and network management software, and their customer base is more diverse, including systems and network administrators. Thus, their information products must be more standard, produced more quickly, and meet the needs of a diverse worldwide audience. Writing skills coupled with project management and tool skills are paramount.

Steve emphasized that you want to hand off those projects that are 1) leading edge or 2) routine, standardized products. He also pointed out that the use of contract agencies needs to be driven from the project and customer requirements—not from the financials. In the great outsourcing onslaught of the late 80s and early 90s, many corporate controllers strove to prove that companies could save large sums of money in the long term by outsourcing functions beyond the company’s core competencies (information development, human resources, clerical). What is, in fact, being shown is that the cost reductions do not last over the long term. You are effectively spending the same money—it is simply divided up differently.

What everyone agrees is that this partnership allows you to gain flexibility and diversity—you can add staff or not to cope with the highs and you do not have to take the whole staff through the troughs of layoff (see A recommendation).

As this model continues to mature, I expect that more organizations might become more hybridized, with project management held internally and the work doled out to vendors. Also, the scarcity of excellent contract workers and dollars they can command should improve the positive visibility of our departments over the next several years as well as the salary levels for our internal staff.

**Working within IRS guidelines**
As Lori Fisher points out, to start such an enterprise requires a close relationship with purchasing and a clear understanding of the IRS guidelines regarding contract labor. Byrne agrees, and the only way to work within these guidelines is to establish relationships with companies that specialize in documentation development relationships rather than independent contractors. Fortunately, Byrne had several key contacts in procurement and human resources to assist him.

**A recommendation**
Overall, the views of the three managers contrasted because their organizations have differing needs and goals. Therefore, the recommendation is to consider the needs of your organization. Do you document routine, standardized products? What degree of expertise do your writers possess? Who is your audience? What are your staffing needs and resources?
New Managers’ Conference Provides a Perfect Forum for Career Development

July and August were busy months for the CIDM. SingleSource Associates and the CIDM hosted the second annual SingleSource 2000 conference in Chicago, Illinois, July 31–August 1. This sold-out event attracted over 200 participants who spent two packed days talking about the transition to single sourcing.

In response to member requests, the CIDM sponsored a second conference in August for individuals new to management. Again, we had a good response—more than fifty new managers joined the twelve speakers for three days of sessions, workshops, and networking. One of the CIDM’s goals is to foster collaboration and mentoring in our profession, and this conference certainly met this goal.

We structured the conference to move from personal topics to theories to practical applications. The participants had the opportunity to hear different—and sometimes conflicting—views on managing information-development departments. In addition to the voices of the speakers, the audience fully engaged on each topic and added their concerns, insights, examples, and questions to the discussions.

On Monday, Brad LaBroad, ADP Dealer Services, and Bill Gearhart, BMC Software, looked at the transition from independent contributor to manager and from one level of management to another. The slightly ironic humor each of them displayed could not hide their genuine enthusiasm for their new roles. Then, De Murr, Disney Imagineering, and Sherri Smith, Compaq Computer Corporation, took the stage and, in a very interactive way, discussed the lessons they’ve learned over their 20+ years as managers.

Monday afternoon offered organizational and personal insights. JoAnn Hackos, CIDM Director, presented an overview of the Information Process Maturity Model, which can help us evaluate our organizations’ strengths and weaknesses objectively. Katherine Brennan Murphy, Tapestry Communications, introduced a number of excellent resources that highlight how to develop leadership, creativity, and influence skills. She included an excellent video by Dewitt Jones, Everyday Creativity, in which this award-winning photographer discusses ways to expand and use our innate creative powers every day at work and home.

In addition to fostering collaboration, we made a serious effort to have fun! On Tuesday, we continued to focus on ourselves as managers and leaders in Beth Barrow’s (Nortel Networks) session, “Being Psychic.” Her talk looked at how analysis tools can help us understand ourselves and others more effectively. Although we spent the bulk of our time on our Myers-Briggs type, Beth started us off with a simpler personality indicator (see The Pig Personality Profile).

Tuesday afternoon, Palmer Pearson, Cadence Design Systems, took us through the tradeoffs and challenges of optimizing group performance while providing opportunities for employees to grow. Donna Sakson and Kathleen Holm, Sakson & Taylor, ended Tuesday’s sessions with a lively discussion on interpersonal communication skills, paying particular attention to dealing with difficult interactions and delegating successfully. Tuesday evening we all reconvened for a banquet, where each participant received a conference “diploma.”

On Wednesday, we turned to three practical skills every manager must master. Diane Davis, Synopsis, discussed performance reviews from the inside out. We then broke into small groups to create performance objectives based on some real-life scenarios. Mark Ace, Ace Communications, gave us down-to-earth, practical advice on effective hiring practices. In the afternoon, JoAnn Hackos offered solid advice on project estimating—why do it, how to get started, and when to get started.

We ended the session with all the participants discussing their “recipes for success.” Throughout the days we spent together, we had frequent breaks where we could meet one another and really talk about the challenges we all face as managers. Most participants felt that these breaks and meals helped them to connect with one another and were, in fact, as important as the formal conference sessions.
Managing by Influence Instead of Authority

Donn Le Vie, Jr., Integrated Concepts, Inc.

I once interviewed for an Information Development manager position in a highly visible and successful product development group in a well-known company. The interviewers emphasized that the most significant challenge would be to get the teams of writers in three different geographic locations (two companies are subsidiaries of the third) to work together toward a unified mission and common vision. During the interview, I asked the writers on the three documentation teams what their expectations were for an ID manager who was charged with getting writers from all three different environments to overcome their perceptions and prejudices of the other environments and to work together as a fine-tuned, well-oiled machine.

The response that resonated with me was: “We need a manager who can manage by influence and not authority.” I had recently purchased a book entitled Influence Without Authority, by Allan Cohen and David Bradford, but had not yet read it. That evening, I found the book in my home library and began reading. As I progressed deeper into the book, I was relieved to read that I had already incorporated many of the authors’ suggestions into my management style, but I also could see that the idea of influence takes on many different shades and hues in a corporate environment.

What is influence and how can we differentiate the authoritative manager from the influential manager? Authoritative managers are often seen (by themselves and others) as the Keepers of the Power, the Purveyors of All Things Good and Evil. Most of their energies and time are directed in a “downward” manner, to the subordinates, giving rise to the heroic assumption that it is the manager or supervisor who is solely responsible for departmental success, visibility, and viability. In an authoritative environment, those reporting to such a manager do not feel empowered to initiate positive change or implement new ideas on a grander scale. Instead, the group goes into survival mode, satisfied with the small successes it generates, and begins the process of delegating upward to the authority figure who has the responsibility for all important decisions.

Influential managers, on the other hand, recognize that the secret to their success (and the success of their subordinates) lies with establishing relationships lateral to and upward from their own center of control. They understand that they must be effective at influencing others and, in turn, being influenced themselves. They understand that influence is not about politics, private agendas, exploitation, or empire building, but rather that influence is about exchange and cooperation. They pass the hero’s baton to their subordinates and build the conditions in which all can participate and enjoy the rewards of success. They understand that being influenced isn’t about paybacks; it’s all about partnering for future use and mutual benefit.

Influence is about finding common ground with others and building strategic alliances or partnerships. In a study conducted by the Harvard Business Review, people engaged in successful alliances believe that:

♦ Collaboration is competition in another form
♦ Harmony is not the most important measure of success
♦ Cooperation has its limits, and companies must defend against competitive compromise
♦ Learning from partners is paramount

In other words, your colleagues can be both your competitors and collaborators toward mutual goals. The skillful manager understands this dilemma and can negotiate through it when necessary.

One model for influence is the Cohen-Bradford Model of Influence Through Exchange, which has served many who have been faced with needing something from someone who had no formal obligation to cooperate. Figure 1 illustrates this influence-through-exchange process.

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Donn is also a frequent presenter at STC and IEEE Professional Communication Society annual conferences. Donn will be writing the Managing 101 column for Best Practices. Please let him know what topics or other items you would be interested to see in this column. He can be reached at donn.leviejr@gte.net
Learning how to influence others and how to be influenced by others isn’t rocket science; it’s people science. You negotiate the corporate landscape and its inhabitants much the way the early pioneers did on their journeys west. With some individuals, you establish relationships for mutual benefit; with others, you trade or exchange items that have a value to each of the parties involved; and with a few, you keep your distance and only engage them when you really have to. (Remember: harmony is not necessarily a sign of success.) True influence is being a catalyst for the success of others without any expectation of payback.

**Figure 1. The Cohen-Bradford Model of Influence Through Exchange**
Moving Technical Communication Online

By George Hayhoe and Katherine Brennan Murphy

When George Hayhoe began his term as Editor of STC’s Technical Communication, he had many action items on his plate. Prior to the change in editorship, STC had appointed a blue-ribbon panel to evaluate its periodicals and make recommendations based on in-depth audience analysis and comparison with similar publications. Even though moving the journal online was one of the top priorities, George’s first task was redesign the journal, which took 18 months. By mid-1996, the journal’s staff was ready to look at online production.

This discussion charts the ups and downs of moving an established print journal to a mirrored online journal. Although the project was successful (Technical Communication is now available online), George encountered many hurdles in accomplishing this goal. Even though most members don’t publish professional journals, we felt that many information-development managers may encounter similar hurdles when moving from print to online publishing.

Planning and Timing
For over twenty years, Technical Communication had been published by a world-class firm that publishes such prestigious journals as Nature (in the United States) and The Journal of the American Medical Association. George approached these partners when making initial inquiries about pricing, timelines, requirements, and so on. His contact was well-versed in both the technology and steps that were needed to proceed. George made careful notes and began to prepare a Request for Proposal (RFP) to be sent out to several firms to bid on the conversion project.

Technology Requirements
In the RFP, George set forth a number of technology requirements, including the following:

♦ Make the journal available in html (allowing browsing and search)
♦ Make the journal available in pdf (allowing printing)
♦ Offer controlled access (by STC member number) to the latest four issues
♦ Offer readers the option of reading abstracts or full text with the ability to go back and forth
♦ Preserve the look and feel of the paper journal even though many users may not have the required fonts
♦ Avoid cookies and asking members to install plug-ins

Both quotes that George received met these technology requirements; however, STC’s existing print vendor’s quote was lower, and there was value with staying with a long-term partner. Once he determined the best quote, George began working on a budget proposal.

The Question of Money
George experienced a time lag in awarding the contract for Technical Communication (see Projects at STC on the following page). George issued the RFP in September of 1997 (roughly a year after he began his fact-finding). Only two companies bid on the RFP and, not surprisingly, these organizations wanted both the print and online contracts.

By the time the quotes came in, it was too late to submit a budget proposal for 1997/98. George wrote the budget proposal for 1998/99 and received funding beginning January 1999. Note that many organizations with annual budgets don’t carry projects into the next year (unless you’ve written your budget proposal that way) and do not accommodate upward spiraling costs. Both of these issues became pressing in the spring of 1999 during the implementation of the project.

You Need What by When?
George needed to spend his budget by the end of May 1999. After consulting with the board, he paid for most of the work up front. Because the informal project plan called for the online journal to be in place in two to three months, the initial plan scheduled the September 1999 issue to be online on the same date that the print version was mailed.

During the planning stages, STC had chosen the lower cost “budget product,” passing on the “deluxe” SGML option. At about the time STC authorized the work, the vendor went through one of those 90s events—a
Projects at STC

STC’s Board of Directors authorizes the annual budgets for all projects. To get authorization to spend money, a project needs to be listed in STC’s strategic plan, and the project lead must submit a detailed project proposal listing quarterly spending amounts. For larger or more innovative projects, the board expects the project lead to get competitive bids. However, because projects are approved on an annual basis, sometimes there is a considerable time lag between the responses to the RFP and the budget approval.

Today, STC has ten issues online, and new issues are being published online on the same date the print issues are mailed.

<www.techcomm-online.org>

merger. Unknown to STC, one result of this merger was that they discontinued the “budget” product and made staffing changes. Everyone who had responded to the RFP or worked on the planning stages left the project.

Further, the “budget” product/process was home grown, written in C. The critical feature of this product/process was the access control feature (recall that STC wanted the most current four issues to be accessed by STC member number). This feature was customized for every journal. However, because the code was undocumented and all of the developers had departed, there was no way to “customize” the product for STC.

Toward the end of summer, George began making urgent calls to check on progress because STC planned to advertise the online journal for September. Finally, after receiving sketchy responses, George went to talk with the company face-to-face. The company didn’t disclose any of the problems, but they did assign a project manager/designer.

George made two more trips (blowing his travel budget) to work on the design. In November, he thought that, given the holidays, tweaks, and so on, they could get the February 2000 issue online and in print. Two weeks before the February deadline, the vendor called to say they couldn’t meet the schedule. Only then did George learn about the merger, staff departure, code problems, and so on.

The vendor told George that they had given STC the “deluxe” product for the same price because they had discontinued the “budget” one. They also let him know that moving to this product added a level of complexity; they were having a tough time writing a filter that met the requirements. They also had no real idea of when they could get done…maybe the beginning of March.

The vendor finally set up project phases. Initially, the journals had no access control and four issues contained abstracts only. Access control didn’t arrive until May.

What Could Have Happened Differently?

George says, “To wind up a long, long story, we have ten issues up and, despite the implementation problems, we’re reasonably pleased with the end result. I just wish it could have been a more pleasant process.” He notes that assumptions and miscommunications account for a great deal of the problems they encountered, and he encourages others to avoid the following pitfalls:

♦ If more than three months elapse between the quote and the contract award, ask the vendor to update the quote.
♦ Be sure you understand how the vendor estimates. STC’s vendor proposed an eight- to ten-week project, but never clarified how the project would be staffed. Did they mean one person for 160 to 200 hours? Make sure you understand how the vendor calculates level of effort and how that relates to your expectations. Be sure you both differentiate in the same way between hours of effort and project duration.
♦ Never pay for work up front, at least not all of it. One major misunderstanding was that the vendor was “giving” STC the “deluxe” product, and they found it difficult to understand why STC was fussing over the schedule.
♦ Before signing a contract, get tasks, with deliverables and dates, on paper. Get the vendor to commit to the dates and detail the consequences of not meeting the schedule or of renegotiating the items.
♦ If you are working with vendors outside your location, include travel money in the budget.
♦ Arrange for regular vendor status reports and maintain weekly (or bi-weekly) communication with the vendor’s project lead.
♦ If the vendor has to significantly change its product or personnel, take the time to revisit the contract to understand the impact.
♦ Understand that “off-the-shelf” does not always mean ready to roll.
♦ Plan for a phased roll-out to put stretch in the schedule and accommodate the normal changes that happen in any organization’s life.

Many information-development managers have faced these same issues when implementing new technology in their organizations. George suggests that you take the time to review these potential pitfalls with your staff before proceeding with new projects. Otherwise, a two- to three-month project could take ten months. George concludes by saying “This was my first big technology project as editor; sometimes there is no other way to learn about the process than to go through it. I know we’ll have a smoother time with the next one.”
The Truth about Consultants

As e-commerce and the online community grow larger, so does the need for IT consultants, business strategists, management consultants, and restructuring experts.

Even a company with the most specific goals can lack the ability to achieve those goals in house, but if you have the insight (and fortitude!) to admit it, you will find that one of the greatest challenges is finding the right consultant. Determining the type of consultant that best fits the needs of your new plan or project may well be the key to achieving success. Is there an effective formula for choosing a consultant who can drive the plan home rather than driving it into the ground? YES!

♦ Define your goals clearly.

♦ Determine if a consultant is truly needed. Does your current staff have a clear understanding of your needs and the capabilities required to meet them? Are staffers being properly used or are their technical skills in a holding pattern, waiting for a less busy day?

♦ Decide to hire a consultant, determine what type of consultant will best suit your needs.

If your goals are clear, but a plan of attack is not, your best bet is a strategy consultant.

If e-business is where you’re headed, contact a firm or a consultant who specializes in e-business technology.

If you are having difficulty defining goals and have no idea where to start and no time to get started, select a management consultant who can walk you through every aspect step-by-step without disrupting the core of your current strategy or your staff.

If your plan is to restructure your entire business, you’ll need an organization consultant.

♦ Research! Research! Research! Locate company evaluations and seek recommendations from trusted sources.

♦ Meet personally with individuals and firms. Don’t risk a personality conflict by blindly selecting your new partner. Select someone with whom you can speak easily and openly. Select someone who can fully explain the benefits of his or her service.

♦ Outline realistic goals on a realistic timeline that you and the consultant both agree on and put in writing. Arrange to have a contract drawn up that defines your expectations. Be sure to include a payment schedule that is based on deliverables. Set a completion date.

Openly discuss your plans with your staff so that they are not alienated in the process and appoint one individual with whom the consultant may communicate directly. Don’t be afraid to request scheduled updates, on-site visits, or even a weekly or monthly phone conference, depending on the size and scope of the project. Be prepared to pay for quality work and experience. Finally, keep in mind that a big name firm doesn’t necessarily guarantee you big results. After all, experts constructed the Titanic, but amateurs with a vision built the Ark.
Breaking news: graduates of the Technical Communication (TC) program at Texas Tech University have more wrinkles on their foreheads than graduates of any other TC program. Given, scientists have not yet published their findings on this matter, but evidence greatly supports the claim.

“What evidence?” you may ask.

Many will testify that graduates of the TC program at Texas Tech are thinkers. With furrowed brow they work, sleep, and play. They train in thinking. They practice thinking in their spare time.

BACKGROUND
Don’t get me wrong, TC graduates aren’t necessarily the brooding type, but they certainly celebrate their thinking skills. For 73 years, the Department of English at Texas Tech has been honing analytical and creative minds. Today the department has replaced the service program established in the 1970s with an undergraduate specialization for English majors and masters’ and doctoral degrees.

Located in Lubbock, Texas, between Dallas and Albuquerque, Texas Tech hosts over 21,000 students. Eighty of these students are studying TC, and about 20 will graduate this year. With a 9:1 student-to-faculty ratio in the TC program, students have the opportunity to interact frequently with their professors through tutorial and individual assistance.

Coursework
According to the Director of Technical Communication, Carolyn Rude, the TC program produces graduates with a broad range of mental skills. TC students take courses that teach them to

♦ think analytically to solve problems
♦ inquire in varying ways
♦ plan and manage complex projects
♦ work as a team
♦ behave ethically
♦ communicate well

Undergraduates in the program earn a BA in English and specialize in TC. They fulfill requirements in technical and oral communication. And, they are encouraged to take courses in visual communication, technical subjects, and computer programming. Many TC students elect to complement their communication skills by learning C++ outside the Department of English.

Students learn other computer skills through their TC classes. All TC graduates use MS Word, and most use RoboHelp, FrameMaker, FrontPage, AuthorWare, and Photoshop.

The faculty strongly urge students to complete internships. Most students use one of the following resources to obtain an internship:

♦ contacting companies who have previously offered internships
♦ posting on the TC intranet
♦ working with campus recruiters

Texas Tech also offers an MA in TC through distance learning. Some students take individual classes without pursuing a degree. Most MA students take courses while they are employed as technical communicators.

POST GRADUATE OPPORTUNITIES
Graduates typically find full-time employment in the same ways they found internships as students. In the past, graduates have secured positions at companies including National Instruments, IBM, MetaSolv, BMC, InterVoice, Compaq, Trilogy, and Idea Integration. Graduates generally stay close to their alma mater, working in the urban areas of Texas: Dallas-Fort Worth, Austin, and Houston.

Courses prepare them well, so employers perceive graduates of Texas Tech as capable and productive employees.

PROGRAM BENEFITS
Inside and outside the classroom, Texas Tech uniquely develops the intellect of TC students in four ways. First, Texas Tech continually
updates the TC program. Last year, the Department of English added courses in Web Publishing, Information Design, and Usability Testing to give TC students the skills that companies seek.

Second, students learn more than technology. They also learn cutting edge theory. In keeping with the humanist tradition of the Department of English, students develop a professional demeanor and responsible character.

Third, faculty teach together and from experience. Faculty have written numerous publications including prominent text books. They have received national honors and held leadership positions in international TC organizations. The TC faculty at Texas Tech is a cohesive group. Collectively, the faculty is excited about the future of their program.

Fourth, technology enables students. Most TC classes are scheduled in the four computer classrooms operated by the Department of English. Faculty have contributed to the national reputation of technology at Texas Tech by writing educational software to facilitate instruction and student achievement.

**Opportunities for Professional Interaction**

Students and faculty actively participate in several professional organizations: STC, ATAW, CPSTC, ACM-SigDoc, and National Council of Teachers of English.

Texas Tech has a strong student STC chapter. The student chapter has received numerous honors. In 1999, one quarter of the students elected to Sigma Tau Chi, the STC honor society, were Texas Tech students.

**Future Focus**

In the future, TC students will have new opportunities to stretch their minds. Technology will become increasingly important to the TC program. Faculty are now considering how to better prepare students for positions in Web-based and e-commerce companies.

Texas Tech will also expand interdisciplinary programs to link with engineering, business, and information technology departments. And, Texas Tech will expand the distance courses it offers through cooperative relationships with other universities.

If your department has any needs relating to college hiring, internships, or other areas, please write or call Dr. Carolyn Rude, Director of Technical Communication.

**MANAGER’S CALENDAR**


**The New Media Instructional Design Symposium.** October 31–November 2, Washington, DC. Sponsored by Influent. 888-333-9088 <www.influent.com>


**Developing a Single-Sourcing Strategy.** November 8–9, Loveland, CO. Taught by Bill Hackos, PhD. November 15–16, Irvine, CA. Taught by JoAnn Hackos, PhD. Sponsored by Seminars in Usable Design. 303-234-0123 <www.usabledesign.com>

**The Annual Tekom Conference.** November 22–24, Rhein-Main-Hallen in Wiesbaden, Germany. Sponsored by Tekom. <www.tekom.de>

**Developing Standards for E-Communication.** December 4–5, Malvern, PA. Sponsored by Seminars in Usable Design, taught by JoAnn Hackos, PhD. 303-234-0123 <www.usabledesign.com>

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BOOK REVIEW

Killer Content

Reviewed by Ann Rockley, Center Associate

The sub-title of Killer Content—Strategies for Web Content and E-Commerce succinctly describes what the book is about. We hear a lot of talk these days about providing effective Web-based content through personalization, but there is very little information on exactly what that involves. Killer Content provides a very sound introduction to the value of Web-based content and strategies for supporting the user experience.

Mai-lan Tomsen focuses little on e-commerce except to make explicit the relationship of value-added content to the e-commerce experience. However, information developers are most likely to be involved in supporting their corporations’ e-commerce initiatives from the content perspective and are very likely going to be asked to create dynamic, personalized information. I reviewed the book from this perspective.

Tomsen has helped leading organizations, such as The Wall Street Journal, New York Times, and Corbis generate revenue from content e-commerce. She worked at Microsoft on COM+ Services, Transaction Server, and Commerce Server and worked at Qpass, where she focused on the growth and development of a system infrastructure to support customer activity for a content network. With a biography like this, you would expect Tomsen to write a highly technical, possibly obscure book. Not so. Her language is easy to understand and every chapter follows an effective organizational foundation.

THE NEED FOR VALUE

Content-based Web sites need to provide value to customers to ensure that they continue to purchase the content rather than go to many sites where similar content may be available free. Success depends upon converting a casual visitor to someone who buys into the business model. The answer to acquiring and keeping Web users does not necessarily depend on the most expensive e-commerce system or graphics; the answer is found in the relationship and value exchange formed between the Web site and visitor around the “killer” content.

Tomsen identifies several factors that users consider when deciding if a site is providing value:

♦ Credibility (Does the site consistently offer accurate and useful information?)
♦ Innovation (Is this unique information that cannot be found elsewhere?)
♦ Utility (Can the user put this information into practice immediately?)
♦ Timeliness (Is the information up to date?)
♦ Relevance (Is the information specifically targeted to the user’s needs?)

In her discussion of relevance, Tomsen makes a fundamental distinction between the kinds of information or content available on the Web:

Killer content is all around the Web. Once you understand what the value exchange looks like, killer content is easily distinguishable from pedestrian commodity content. Commodity content is information that is widely available and generally free to access on the Web. Large portal sites like Yahoo! offer commodity content…in order to drive additional revenue through advertising and e-commerce. Higher quality content that also has “scarcity” (i.e., is not widely available on the Web) is considered premium content. Users generally access premium content through purchase or registration (page 21).

By this definition, the “Members Only” section of the CIDM’s Website would be considered “premium” content. A site’s content is considered “killer” if the information meets the criteria listed above. When faced with
developing killer-content Web sites, information developers should consider these characteristics—both positive and negative. We can use these characteristics in the requirements, definition, and evaluation phases of our projects.

Usability
The trend toward flashy presentation plagues information-development department managers when their staffs want to add the latest graphic bells and whistles to their work. Tomsen contrasts MSNBC’s and CNN’s Web sites in terms of presentation load (see Compare MSNBC and CNN).

Presentation decisions should depend on the audience you are targeting, including the equipment available to them and their “patience” with screen painting. Tomsen concludes by advising: “… the content value exchange depends first on the provision of information and secondarily on the presentation and format of the content” (page 58).

Understanding the Revenue
Part 1 concludes with an in-depth discussion of how money plays into the value-exchange equation. Information developers might be tempted to skip this chapter; however, it is time for us to become full partners in our organizations. A partnership requires an understanding of the pluses and minuses of the Web business models. Tomsen identifies five types of revenue streams for content value exchange:

- Traditional advertising pricing model that uses target audience analysis.
- Pay per Item or a la carte products where you download a specific document for a price. For example, you can now pay to license New Yorker cartoons on your Web site.
- A licensing agreement where the vendor sends information securely and perhaps in a customized manner to you.
- Subscription—for example, McAfee’s new security product that is Web based.
- Syndication operates just as syndicated columns do in the newspaper business.

The Web and e-commerce are driving businesses to develop new models of working with their customers. Since the Web is expanding so quickly, customers are more easily and visibly “voting with their feet” when they do not find the value, usability, or the price point they are looking for. On the flip side, content publishers—for the first time—have the opportunity “to earn money from their core competencies of creating and aggregating quality content” (page 98). Good news, indeed, for information-development departments.

Comparing MSNBC and CNN
To use MSNBC’s interactive menus, the user must first download software. Even then, the graphics on the home page take more than 15 seconds to load at 28.8 baud. In contrast, CNN’s homepage looks “drab”; however, users can immediately get to the content.

Designing Web Information Structure
The second part of Killer Content offers an array of strategies that site and content designers can use to develop value-added content sites. Tomsen discusses user experience, site structure, and internal processes. As information developers, we have an opportunity to discover what users expect by analyzing their goals. Tomsen focuses her attention on all the strategies that you can incorporate to bring users back; some of these are similar to online help development, and some are much more like marketing communication.

The chapter, “Designing Web Information Structure,” provides an excellent reference on design issues. Tomsen summarizes the benefits of user-friendly navigation, targeted content, and access that requires minimal “friction” (page 136).

To help with your design (or redesign) efforts, Tomsen offers three suggestions.

Use consistent design and navigation
Effective navigation can be achieved by using standard templates and a site search utility. Inconsistent placement of standard elements on pages is disconcerting and confusing to users. Tomsen suggests that any site that has more than three pages should offer intelligent search and indexing. Metatags should be added to pages to facilitate searching. Templates should enforce consistent structure.

Support personalization
Personalization is the publisher’s ability to gear content on a Web site to individual tastes and preferences. A personalized experience for the
Net user results from the custom delivery of content based on user-defined preferences. While personalization is a hot topic for e-commerce sites, Tomsen’s discussion of providing a personalized experience for content users is also applicable to information developers.

As our products become more complex, integrated, and customized, our ability to provide useful information to our customers diminishes with traditional documentation models. Using personalization, we can choose relevant components of information and organize them to meet our customers’ specific needs. Our customers no longer have to struggle to apply generic information to their needs.

For the Internet publisher, personalizing the Net user experience provides two benefits: the ability to attract and keep new members and the ability to monitor user preferences. The second benefit is the most valuable to the information developer. Personal choices provide a tremendous amount of indirect feedback on user requirements. Analysis of these choices can assist you in improving the type and quality of information in future releases of information.

Guarding Privacy and Respecting Rights
Tomsen gives excellent, detailed advice on several other site design topics that affect the user experience. Privacy and ownership rights affect all Net users and are often overlooked in the heat of design. As in the past, information-development departments have the responsibility for both protecting their organizations’ copyrights, patents, and trademarks and ensuring that others in the organizations respect the copyrights and privacy of others. Tomsen recommends that we make filling in Web-based forms easier, offer privacy safeguards, and ensure that we respect copyrights.

Process Infrastructure
Killer Content concludes where many organizations start: tools, processes, and infrastructure. Tomsen points out that success depends upon effective publishing processes and a good understanding of the capabilities of the tools. However, that doesn’t mean that tools are unimportant, simply that they should not be our first concern when designing for online viewing. An effective process enables organizations to create, publish, and manage frequent content updates, as well as to perform sophisticated analyses of content browsing and purchase patterns.

Summary
Mai-lan Tomsen provides a clear, succinct presentation on designing effective content-based sites. At fewer than 200 pages, Killer Content is a book that all information developers responsible for putting content on Web sites should read. It provides a valuable overview of what makes a site successful. Killer Content offers readers an interesting overview of e-commerce, very much from an information-developer’s perspective and acts as a good e-commerce business primer, especially in its clear definitions of terms and practices.
I found the Information Plan made it easier for people to understand who is their audience and that made it easier to get the focus fixed from the beginning. Furthermore, the Information Plan requires the person writing the plan to state the source of their information concerning the end-user. So, right from the beginning, it means the project manager should know whether we are dealing with a well-defined or guesstimated user definition and can take action accordingly. In my opinion it is all about establishing the discipline to require processes/tools to be followed/used and then everyone else can make decisions knowing the quality of the information.

I have always maintained there are three kinds of Tech Writers:

- Production Writers (a courtesy title only) for the person who makes the final set of files into the finished, deliverable product.
- Technical Editors (the vast majority) who at one end of the scale can work with the near to finished work of the document author or on the other end of the scale, can work with the first draft provided by the author to develop the material accordingly.
- The Technical Author (few and far between) who can prepare the material from scratch for the document owner to edit/annotate as required and to finally claim as their own work which they submit.

The first category knows nothing about the users. The second category generally assumes the author knows what the user requires and so often pays less attention to the user aspects of the work. The third category, as the author, takes the responsibility of serving the user and if unwilling to take that role, then should not be allowed to start the job in the first place.

At the end of the day, it is the combination of the Project Manager and the role the Tech Writer accepts/adopts that will determine whether the book will suit the user because these two people are responsible for signing off the Information Plan.

No plan means “this documentation is not user considerate.”

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Focusing on User-centered Design

Hi JoAnn,

Yesterday I had a wonderful day catching up with some reading (not much time for that), and I had the time to do some reflecting.

With great interest I read the April issue of Usability Interface about testing the documentation and the 10 heuristic statements for documentation.

Also, the article about technical communication and Customer Support in Best Practices (August issue) was very interesting.

These articles gave me a lot of ideas. I am currently trying to do a long term plan for processes and quality, and these articles provided me with a lot of input.

Then I read your column and was quickly brought down to earth again. My immediate reaction was that it just can’t be as bad as you were describing it. But then, thinking it over again, I realized that it is possible. (Unfortunately!)

My guess is that people are scared of the change. It is easier sitting by the desk, writing, and not encountering any people at all (not users, not marketing, not training). Then nobody can tell that you are wrong. By opening up to users (and the user is always right…) there is a great possibility that you, as a technical writer, will be wrong in your assumptions.

And all of a sudden a lot of hard work begins: thinking and restructuring, and the confidence goes down because you can still be wrong even though you work very hard.

Receiving comments on your work in a professional manner (not being offended by the criticism) can be hard and many people may need training to handle user comments. Also, the technical writers might be worried about their own competence when it comes to getting the information and using it to make the documentation better.

Maybe also the vision of user-centered design can be too large for many writers to comprehend. They know by heart that it is the right way to go, but they might have problems seeing how they fit into the picture. What can they do that would make a difference?

♦ Never let go. If user-centered design is the vision, then it is and may not be negotiable. Continue to spread the word over and over again.

♦ Identify baby steps that will lead to the vision, and keep on reminding that this is the way to go to get to the vision.

♦ Talk personally to every writer to make them see how they fit into the picture. Many different roles are needed to make this happen. Identify these roles and let the writers tell you where they think they fit in.

♦ Measure customer satisfaction, etc. to be able to show that it makes a difference to the customer.

♦ We are talking a lot about how hard it is for writers to abandon the one book = one writer thought and move into information elements. However, the change to user-centered design might be as hard for the writer. It will not just happen, unless carefully planned.

Well, just some of my thoughts. We are slowly getting back to the routines after a very rainy summer. School starts next week, but a lot of people are still on vacation so there is time for reflection… we all need that sometimes!

Best regards,

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