DocQment

Quality PIC Newsletter

Volume 5, Number 1
Winter, 1997

Look inside to...

Quality PIC Mission:

To help members learn more about quality processes and quality assessment to improve their technical communication and to share knowledge of these improved processes with other technical communicators worldwide.

Coming soon: Quality PIC will be on the web!

Lori Fisher, PIC Manager

Beginning this month, the Quality PIC is building its own web page linked to the STC home page. Because members of the Quality PIC live around the world, this page may be our best way to communicate and share ideas with one another. This will be **our** page—we will look forward to contributions from all of you in the coming year to make this a vibrant, meaningful, informative web site. If each member contributed just one paragraph of information about how to measure or improve quality, just think of all the good ideas we would have available to share!

Our web page will be organized in 4 sections: an overall home page that describes the PIC itself, and one page each for our three special interest work groups (Metrics, ISO/9000, Quality Processes and Techniques). We would like the information on our site to be specific, useful, and practical, so that each of us can find something there of value to us in our work. Over time, we would like to add more and more information to each of these special-interest pages, and we can certainly add other kinds of pages to the site at your recommendation. We also plan to publish the Quality Bibliography, compiled last year by Don Lenk and distributed at the 1996 Annual Conference in Seattle, on our website. Effective March 31, 1997, our URL will be: http://stc.org/pics/quality. After that date, please go take a look, and then use the **Reply** button to let us know what you would like to see on the web and what you can provide as content for our site. We need each of you to make this a success!

So catch onto the quality wave and hang on tight! Happy surfing! Q

When a quality result is a goal

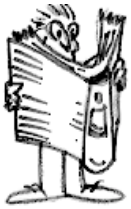
Reprinted with permission from the January/February issue of "Eye for Design", a publication from User Interface Engineering.

"Is that good enough?" This is a question we asked users over and over again in a recent study. We were interested in whether users could tell if they had achieved their target quality.

We've worked on several projects recently where quality of the result was important. One was flatbed scanners, where the quality of the image had to be as close as possible to the original. Another was network management tools, where the quality of the information had to closely match what was actually happening on the network. And a third was sales ordering tools for complicated products, (such as custom brake assemblies) where the quality of the resulting products had to be perfect. (In this article, we'll focus on the scanner examples. However, the issues discussed are relevant to more than just scanners and graphics.)

see "Result" on page 2

BookQueue



Need a book on standards?

Book Reviewer: David Dick

My search for standards for technical publications led to me to two books produced by two industry giants: Microsoft and Apple.

The Microsoft Manual of Style for Technical Publications
Microsoft Press Redmond, Washington 1995 ISBN 1-55615-939-0.

This book is a concise, user-friendly, A to Z reference of how to use terms effectively, topics of style, good technical writing practices and policy.

The Apple Computer Publications Style Guide
Apple Computer Apple Products Developer's Association, Cupertino, CA 1994

This book contains much of the same information found in the *Microsoft Manual of Style*. What makes this book distinctive is the description of how to write text for balloons and create glossaries. The book is available absolutely free from Apple Computer at www.info.apple.com/dev/developerservices.html under the Publications Guides directory. Q

Read a good book on quality lately? Send us your review of it, in 300 words or less.

"Result" from page 1

In these projects, we found a couple of interesting items. First, users had no basis to understand what the ultimate quality would look like. Second, they did not have a clear mental model of how to reach it. And third, the products they used did very little to help them resolve these issues.

How good is good enough?

This may seem like a straightforward question. But if you have just purchased a scanner, what is the best it can produce? Can it scan and interpret a document with 100% accuracy? 90% accuracy? 50% accuracy?

The users we worked with spent a lot of time on this question. They kept adjusting various controls, trying to decide if it had any effect on the quality. For example, when scanning a logo, they would quickly notice that the image appeared grainy or coarse on the screen. They would immediately start adjusting the contrast and brightness. This would yield different results, such as less coarseness while creating lighter shades of the solid colors, or even loss of color altogether.

The users would change the half dozen or so controls, each one making one aspect of the image a little better while destroying another. And each time, they would try to decide if they were making it better or worse. Often they couldn't really tell.

There's an old saying that applies here: "If you don't know where you are going, any road will get you there." These users lacked a *vision*. They really didn't know what the best they could do was.

In our scanner study, each user evaluated three different scanners. Their perspective on the quality of the scanner's output was definitely affected by the other products they tested. Most users started with a high expectation of the quality. They felt that when scanning an image, the scanners would produce a near perfect copy of that image. As time went on, however, they lowered their expectations as the scanners failed to produce this result.

The scary part is that their lowered expectations were not based on what the equipment could actually do. Instead, it was purely based on the fact that they could not control the quality of the result. The hard work of several development teams was lost on these individuals.

The Point of Reference

In each of the scanners we tested, there were dozens of software functions that affected quality: Contrast, Brightness, Resolution, Gamma Correction, Calibration, Scaling, Image Size, Image Type and Sharpness, plus many more. However, the users didn't really have a good mental model that told them how to manipulate these controls to produce the best results.

In essence, they didn't know where they were going and they didn't know how to get there. Sure, the products explained what the functions did, or did they? For example, here is what one product said about the Contrast control: "You can adjust the Contrast of the image to improve on a flat or dull original, or one that is either too soft or too 'contrasty.'"

Would you know whether your images was too soft or "contrasty?" The users we observed didn't. Sometimes examples were provided, but most of the time they didn't help either.

What Is Missing?

What is missing is the knowledge that users need, not only to accomplish their tasks, but to produce a quality result in the process. As with any mental model, there are three components:

1) What the user already knows

2) What the product tells the user

3) What the user needs to know

see "Result" on page 3

Moving toward a behavioral model of quality control

William H. DuBay

One of the biggest obstacles in the quality control of documents is the failure to adequately describe behavioral objectives. Too many documents still focus on how machines work rather than detailing the user tasks. As a result, they end up looking like well written compositions about machines rather than good instructions that step readers through a task.

Back in the days when I was wiring together my first computer kits, I was fortunate to use the excellent assembly documents produced by Heathkit. These documents were so good that they guaranteed that you would bring the project to completion. If you failed, Heathkit would complete it for you, for free. Each chapter started with the behavioral objectives: "By the end of this chapter, you will have completed the following tasks:.." A check list at the end of the chapter confirmed the results, thereby building quality control into the document itself.

It is significant that Heathkit produced not only award-winning documents, but also award-winning electronic training courses. Technical writers could do well by taking a lesson from the training profession, which is firmly committed to the behavioral model of quality control.

The first step in quality control is identifying testable elements. We do that by carefully stating the behavioral objectives, which provide a measurable element for testing.

Bill DuBay is a Principal Technical Writer at Phoenix Technologies Ltd.

Using standards to build quality into online help

Donna M. Marcotte

The title of this article is also the title of a session I had the privilege of presenting with C.J. Bibus, Ed.D, and Kristy Dale at the 1996 Society for Technical Communication's (STC) Annual Conference in Seattle, and again at the STC Region 5 conference in Dallas. At the Region 5 conference, C.J. introduced the session by explaining the significance of the key terms in the title: quality, build and standards. This article is a synopsis of that introduction. Both the session and this article are based on C.J.'s research and work on quality, standards and help design.

There are many definitions of quality, but we use Juran's definition: "fitness for use." That is, the key component of quality is the customers' ability to achieve their goals with relative ease and in minimal time. Regarding online help, the user's goal is usually finding the answer to a question on how to perform a certain task with the software so they can return to their main task—what they are really trying to do—such as preparing a memo or processing an invoice.

Quality cannot be inspected into a product.

The word *build* supports Juran's notion that quality cannot be inspected into a product after it is produced: you must determine a process that builds a quality product. In manufacturing, quality control by inspection usually means discarding defective products. In producing online help, quality control by inspection usually means editing text. But editing text cannot solve the problems of a poorly designed help system that does not let users find the information they need quickly and easily.

see "Standards" on page 5

"Result" from page 2

As developers, we cannot change what users already know when they sit down with the product. However, we can change what we tell them and what they need to know.

Explain The Basics

When moving into a new domain, users need a point of reference, a place from which they can base their knowledge. Products that demonstrate their true capabilities up-front give users a framework in which to place all of their newfound knowledge.

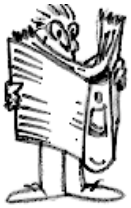
For example, allowing users to print out high-grade images that were scanned at the factory would give users an immediate sense of what their system was capable of. They could then work from there.

Reducing The Need

The ultimate technique is to reduce what users need to know. Task oriented tools, such as wizards, can allow the user to step through a series of questions, each one leading to better quality results.

Another example is the Variants feature in Adobe's Photoshop. This takes the current image and shows 5-8 variants, each with different variables adjusted. The user just clicks on the variant that looks the best, without having to know what controls were actually adjusted.

BookQueue



Lori Fisher

Here are some recommendations for winter reading, extracted from the STC Quality PIC Bibliography:

Effective Documentation: What We have Learned from Research
Stephen Doheny-Farina, editor The MIT Press, 1988

Quality of Technical Documentation: Utrecth Studies in Language and Communication
Carl Jansen, Pieter van der Poort, and Ron Verheijen, editors Editions Rodopi B V, 1994

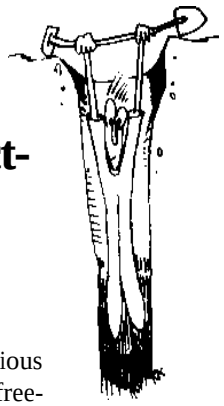
Quality is Free: the Art of Making Quality Certain
Philip B. Crosby McGraw Hill, 1979 ISBN 0-0701-4512-1

Juran on Quality by Design: The New Steps for Planning Quality
J. M. Juran The Free Press, 1992

It's About Time: A Fable About the Next Dimension of Quality
John Guaspari AMACOM, a division of American Management Association, 1992 ISBN 0-8144-5130-6

Do you have a favorite title on quality? Send it to Don Lenk to include in the next update of the Quality PIC Bibliography or send it to the newsletter and we will forward it to Don. Q

In the trenches



A new approach to quality in contracting

Phil Brittenham

As outsourcing increases, interest grows in contractor houses that offer an off-site facility and permanent staff. The benefits are obvious when space and equipment are limited and managing an influx of free-lance personnel is too burdensome. In a recent instance, a company paid to restructure its temp provider as a contractor house. Because when projects are developed in several locations and across different companies, sometimes at considerable distances, the question is whether quality is adversely affected. I have spent some time reflecting on how the contractor house that I work for ensures a quality product, and I can share some thoughts on how customers can also make this kind of relationship work.

Multi-site collaborative projects, unlike turn-key jobs (that are sent out and forgotten about), require ongoing interaction by the contractor and customer at different locations and staff levels. The answer to the quality question is the same as for so many other things in life—successful outcomes are proportional to one's efforts. The suggestions below have proven useful in establishing relationships that deliver quality documents.

Contractor Selection. Don't waste the learning curve on a one-shot job if you have a continuing need. Build on the experience you paid for by selecting a contractor with sufficient infrastructure and resources to meet current and future needs. Tour the facility, if possible, review resumes, and interview at least the management team. Get a feel for the corporate culture—after all, you're going to have to work with these people and their management. A contractor should be flexible enough to rev up to support rush jobs and stable enough to weather periods of inactivity.

Planning. Any project begins with a good plan and coordination. A multi-site project is a collaboration, and it needs to be managed on both ends. If your contractor doesn't provide a strong project leader and management plan, watch out because you'll likely be managing both ends of the project! Both management teams must have the authority to unsnarl logjams and commit resources, and the contractor should track the information you require in the form you want it. Make sure that the estimate includes time for management, meetings, reviews, reporting, routine interaction, etc. You'd hate to have your contractor contact tell you, "I'm sorry, but you can't afford to talk to me today."

Communications. Both parties must take the time to communicate effectively. The customer should keep in mind that the purpose of contracting a multi-site project is to extend the reach of the company's capabilities, not to shed work. The project still involves your resources and requires ongoing management attention. Communications expectations must be clearly understood and structured.

Technology Options. Telephones, E-mail and electronic file transfers, video cameras, teleconferencing, and FAXing all help solve the greatest disadvantage of multi-site projects—distance. Both parties should be creative in using available tools to overcome distance factors, and the literature on long-distance learning serves us well as a resource.

I won't say that managing a project over multiple sites is preferable to doing it in house, but when such projects are done well, the project discipline can actually enhance quality and cost effectiveness.

see "Approach" on page 5

Musing on metrics

Quality is conformance to requirements

Steve Jong

As a working professional, I have no time for abstract, philosophical definitions of quality with no practical application. The most useful definition I've found is by Philip Crosby of ITT, in his 1979 book *Quality is Free: Quality is Conformance to Requirements.* There are many other definitions of quality; consider Juran's "adherence to specification" and Tagushi's "reduce variation in quality." But all share a common theme of satisfying requirements.

How does this help us? Well, start by considering where documentation requirements originate. I believe there are three sources: our customers, our clients, and ourselves, in that order. By "customers" I mean those who use our information products; by "clients" I mean those who contract for our services; and by "ourselves" I mean those of us—writers, illustrators, and editors—who do the work.

The precedence order is no mystery: after all, the customer is always right. (Digital Equipment Corporation defines quality simply and entirely as customer satisfaction; Xerox Corporation defines it as "total customer satisfaction.") Customer satisfaction, then, is our primary concern. But what satisfies customers? From the definition used in benchmarking, we know we must satisfy our customers' Critical Success Factors (CSFs). What's a CSF? Here's the Xerox definition: "A characteristic, condition, or variable that has direct impact on your customer's satisfaction and hence your own success." Simply put, if you satisfy the CSFs, you satisfy the customer, and if the customer is satisfied, then your work was of high quality.

Requirements also come from our clients. Their concerns involve processes, such as adherence to schedule and budget. We need to satisfy our clients because they're paying the bill. However, given the precedence order, we shouldn't sacrifice customer satisfaction for client satisfaction.

Finally, we have our own departmental and professional standards and conventions. I create modular, structured documentation, not because clients or customers ask for it, but because I believe it's the best approach. We need to feel that we've done a good job, but not at the expense of dissatisfying customers or clients.

When Crosby speaks of conformance, he means for us to measure the "cost of quality," defined as the expense of doing things wrong (that is, scrap and rework). I'll write in detail about documentation metrics in future columns, but first we have to figure out what to measure.

Next time: What do your customers want? Ask them!

Steven Jong is Documentation Group Leader at Lightbridge, Inc., in Waltham, Massachusetts.

"Approach" from page 4

Phil Brittenham manages long-distance documentation projects for Tech Reps, Inc., a publications contracting firm in Albuquerque, NM.

"Standards" from page 3

Standards are used to effectively and consistently apply your development process. We all know standards define how information looks, for example use of capitalization and special fonts. However, the key to standards for online help is defining how the information works. In very general terms, defining how information works is done by: carefully analyzing the system you are documenting, identifying relevant categories of topics (such as overviews, definitions and procedures), determining a consistent pattern of how those topics are related, then incorporating that information into your written standards.

Because of the amount of analytical work required, and the many issues you must consider and resolve, developing standards is an iterative process that should involve representatives from the entire software development team, including your users.

1. J.M. Juran. "Consumerism and Product Quality." *Quality Progress*, June 1970.

Donna Marcotte is a software documentation analyst at Exxon Production Research Co. in Houston, TX. For more information, contact her at Donna.M.Marcotte @ Exxon.Sprint.com.

PIC on me!

Quality PIC adds new liaisons to staff

Lori Fisher

Thanks to the following volunteers who are now liaisons to other PICs within STC. These liaisons will be monitoring other newsletters and web pages for relevant material to share with members of our Quality PIC, and will also make recommendations about ways we can coordinate activities with other PICs.

Sheila Rainfor
Emerging Technologies
Mary Ann Campbell
Independent Contractor
Mary Durlak
Independent Contractor
Debbie Malone
Management, Usability
Jean Femia
Management
Julia Land
Marketing, Usability
Bonnie Graham
Online PIC
Peg Rickard
Usability
Catherine Dinno
Usability

We can always use additional liaisons, especially to the following PICs: International, Education and Research, Scientific. If you belong to one of these other PICs and would like to volunteer, send an email message to Lori Fisher (lorif@vnet.ibm.com) or call her at the number listed in the staff box.

The HCI certificate program: sharing a quality initiative

Robert Krull and Dave Hans

Earlier this year, RPI and IBM embarked on a joint project to develop a graduate level certificate program in designing effective human computer user interfaces. As the team formed, both sides expressed concern over a single, but very important issue - how could partners from different environments understand each other's basic needs.

Offering courses to enhance the quality of work done by professional communicators in industry requires a university to tune both curricula and instructional techniques. This tuning may be most efficient and palatable to traditionally-oriented professors because it is it seen as another kind of adaptation to an audience.

Both professional communicators and professors are comfortable with the idea of audience adaptation. Communicators adapt their product support information to their readers. Professors tell their students to think about their readers and, in their own scholarly writing, professors consider the needs and goals of fellow scholars.

Together, professional communicators and professors can explore their way toward optimal university courses for industry. Without an audience orientation, educational programs for industry may stumble over the parochial concerns of either stakeholder. For example, professional communicators could expect too much training specific to today's products and markets, at the expense of a broader education for tomorrow's demands. Professors may balk at adapting to industry's needs on the grounds of academic freedom.

The HCI program at Rensselaer was developed with the guidance of a reference group. This group included members from IBM sites and the Rensselaer faculty. Using conference calls, on-site meetings, and email the reference group met on a regular basis to review course outlines, objectives, reading material and content. While Rensselaer was ultimately responsible for the program development, they used the industry input to help validate ideas, evaluate content and bring an industry view to their course development.

The reference group directed Rensselaer closer to its goal of developing graduate-level courses that will enhance the quality of work done by IBM and other companies' employees...

Though the meetings of the reference group have occasionally generated some heat, they served a beneficial purpose to the team. The reference group directed Rensselaer closer to the its goal of developing graduate-level courses that will enhance the quality of work done by IBM and other companies' employees, and Rensselaer faculty will feel comfortable teaching. The industry team members have had an opportunity to take responsibility For the industry members, this group has provided an opportunity to express market and customer issues that require focused design education. The education that the university can provide.

see "HCI" on page 7

Membership report

After deleting members no longer interested in retaining membership in August, we began with a new verified list of 268 members, including 104 new members from Australia, Austria, Canada, Japan, and the US. In September we added 67 new members from Australia, Canada, France, Israel, Japan, Holland, New Zealand, and the US for a total of 336, and in October we grew by another 10 to 346 total members. Our total membership as of November is 354 members.

How do you measure quality?

Ted Dennison

For most of us document quality is a very nebulous concept. We know what a good document looks like, or how it reads, but we don't always know how to define it.

Many different elements affect a reader's perception of the quality of a document:

How closely does it meet the needs and expectations of the user?

Is it organized clearly and understandably with a logical flow?

Is it free of distracting grammar and typographical errors?

Are graphic elements clear and meaningful?

Is the index complete with clearly defined entries and links?

Is the information accurate?

Many of us create our documents using guides that are provided us or some that we have developed and refined over several years. We improve accuracy, content and organization through the review process. Perhaps we even track our error rate (if we have developed a measure). Generally, if we have several years of experience, or some knowledgeable help, we produce a useful document.

Well, the Quality Metrics subgroup is charged with the responsibility of helping STC members to move to a higher level of quality by providing guidance in the following areas:

Defining meaningful quality measures

Providing effective methods of applying the quality measures

Identifying and setting clear, measurable goals

Creating an auditing process to measure document quality improvement

Subgroup committee members can't do this alone. We'll need help from you who have created solutions and refined them. We'll want you to describe how you have already solved some of the metrics problems and how these solutions can be applied on a broader basis.

As we develop our quality metrics procedures, we'll put the results on the Quality PIC Web Page. This should make it simple for everyone in STC to access the information.

If you feel you already have something to contribute, please mail it to Ted Dennison at:

tdennison@utsci.com or Utah Scientific 4750 Wiley Post Way Salt Lake City, UT 84116

You can also call me at 801-575-3231

Ted Dennison is a senior (and the only) technical writer at Utah Scientific.

Volunteer needed:

"In the Trenches" Coordinator

An hour or so per month commitment—be an active part of the Quality PIC. E-mail Lori Fisher at lori@vnet.ibm.com or call 408-463-3573 for more details.

"HCI" from page 6

As we enter 1997, the reference group is planning to meet again to work on the final two courses in the HCI program. In addition, the professors and industry students will have an opportunity to share insights and feedback on the first two courses delivered in 1996. In this way we will continue to work as a team to share the quality initiative.

Rober Krull is a professor at Rensselaer Polytechnic Institute in Troy, New York and teaches the HCI program.

Dave Hans is a Senior Information Developer for IBM in Poughkeepsie, New York.

Reminders

Send your newsletter contributions by March 1, 1997.

Plan to join the Quality PIC at the STC 44th Annual Conference in Toronto on Sunday, May 11 at 2 pm. We are also sponsoring a progression session on quality topics! See you there!

Submit your final papers for the STC 44th Annual Conference Proceedings by February 1, 1997.

STC Quality PIC Newsletter
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Next submission deadline: March 1, 1997

DocQment Quality PIC Newsletter

We welcome articles or features for "BookQueue," "What's Hot," or "In the Trenches." Feature contributions should be 250 words or less. Articles should be 400 words or less. Email or phone the *DocQment* editor, Lori Fisher, if you want to review your topic before submitting an article or request style guidelines.

Submit your contributions at any time during the year to the *DocQment* editor. We prefer ASCII text via email. You can also mail us a 3½" PC- or Macintosh-formatted diskette with ASCII text, Word or RTF files (please mark format and application version number clearly on diskette, and include your phone number and name.) If you want the diskette returned, include a self-addressed, stamped envelope. All submissions will be edited for length, clarity, and appropriateness. Include the word count with your submission.

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