spectrum '93

34th Annual Seminar of the Society for Technical Communication
Rochester Chapter
March 25 and 26, 1993

Proceedings

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Session 1

Enhancing the Review Process: Giving and Receiving Constructive Feedback

Laurie Pritchard

Abstract: *Clear, positive feedback can contribute significantly toward improving the quality of printed and on-line documentation. When feedback is negative, unclear, or incomplete, however, the accuracy and quality of a document can suffer, and misunderstandings between colleagues can result. Those who are responsible for reviewing documentation can enhance that process by knowing what type of feedback to provide, and how to offer it in a clear and constructive way. Those who request feedback on their documentation projects also can enhance the review process by clearly identifying the project scope and specifying their evaluation needs to their reviewers.*

Introduction

Designing and writing documentation is a creative process. The challenge of shaping the tools that will educate and inform our users is potentially one of the most satisfying forms of professional communication.

That process, however, is not without its periods of difficulty and frustration. And most of us would agree that reviews are one of the more trying times in the course of a project. Reviewing requires that we submit our work to the scrutiny of others involved in a project, including our fellow writers. It requires that we be open to criticism, patient in the face of delays, and prepared for the possibility making major content changes. And even though we want to feel that we are doing our best work, the review process is often unpredictable at best.

What can writers – and their reviewers – do to make this process smoother and more efficient? This paper will look at some of the problems that typically occur in the course of documentation reviews, and will offer suggestions on how writers and reviewers can work together to enhance this crucial part of technical communication.

The Review Scenario

In a typical project, a document passes through many hands before it is released. It will most likely be reviewed at least once by fellow writers, possibly an editor, and representatives from product development, marketing, technical support, and others who share in the responsibility for ensuring that the document meets both corporate guidelines and the needs of customers. Ask anyone involved with a document review about that process, though, and they'll probably agree that it is never easy – that more often it is annoying, confusing, and time-consuming.

Problems Facing Writers

Writers may face any or all of the following problems:

- Review copies aren't returned on time and sometimes not at all.
- Comments and corrections are illegible.
- Comments are vague or incomplete.
- Reviewers make grammatical corrections and do not address technical accuracy.
- Reviewers ask technical questions of the writer that the writer cannot answer.
- Comments are negative, emphasizing what is wrong without noting what is right.
- Reviewers do not distinguish between actual corrections and comments or suggestions.
- Reviewers are not available for follow-up questions or subsequent reviews.

Problems Facing Reviewers

Reviewers may face any or all of the following problems:

- They are not given enough time to review the document.
- Review requirements conflict with their schedules and priorities.
- Their workload is heavy.

- They do not know what type of feedback the writer needs.
- They do not know the status of the document; for example, whther it is first draft, second draft, or beta test copy.
- They do not know why they are included in the review process.
- They hear nothing further from the writer after the review and feel that their time has been wasted; their comments ignored.
- They are not clear about what responsibility they have, if any, for the quality of the document.

Many of these problems are the result of obstacles that accompany every project, such as limited resources, tight deadlines, heavy workloads, and conflicting priorities among departments. They also, however, may reflect the fact that both writers and reviewers do not know what is expected of them. In his book *Writing Better Computer User Documentation from Paper to Hypertext*, R. John Brockmann notes:

> No one has ever been taught in school how to review a user manual effectively. Thus the quality and quantity of reviews you receive are directly related to the amount of time and effort you expend in spelling out what is needed.[1]

At one division of Hewlett-Packard, technical communicators actually created a class for non-editing reviewers in which they taught reviewers how to mark changes on document drafts and use a checklist of review items.[2]

When writers and their reviewers have a clearer picture of the review process, they can work more effectively together to provide positive, accurate, and focused feedback to one another. The following paragraphs offer some guidelines that can make the process more effective for both writers and reviewers.

Enhancing Reviews -- What Writers and Reviewers Can Do

Suggestions for Writers

Select your reviewers carefully. Find out who has the technical and creative expertise you need for thorough and effective reviews.

Prepare your reviewers. Notify them ahead of time, by phone or e-mail, that they'll be receiving a draft, what manual they'll be receiving, and what part of the project it represents.

Let your reviewers know what they're getting, and what to do with it. Your reviewers will have be in a much better position to conduct an effective evaluation if they know what you need from them. In your cover memo, let them know:

- The status of the draft -- for example, if it is a first draft, second draft, or beta test copy. Be sure to note this information on the draft itself as well as in your cover memo.
- How the manual relates to other components of the project -- for example, if it is a companion manual to another document.
- Any special situations concerning the draft, such as an upcoming product demonstration or limited release.
- What you would like the reviewer to do. This might seem obvious at first -- you want them to review the manual, of course. But the term "review" may mean something entirely to your reviewers. To them, it could mean a quick read, a list of suggestions, a quick edit, a wholesale rewrite, or simply a sign-off. All too many of us have had the frustrating experience of sending a draft out for a technical review, only to have it come back marked with grammatical and spelling corrections. Such an oversight is not always intentional, and it can be avoided if your reviewers know what type of feedback you expect from them.

Another way of clarifying your needs is to provide a checklist in your cover letter that outlines the issues you would like the reviewer to address.[3] For technical reviews, your checklist might include the following items:

- Are all of the required steps covered in this procedure?
- Are all of the software updates included?
- Is the level of detail appropriate for the target audience?
- Is all pertinent information included?

- Any areas of the draft that need special attention or in which you have specific questions. You may want to mark these areas on your manuscript so that they will receive the attention they need.
- Any holes or gaps in the draft, such as sections yet to be written or graphics yet to be developed. A simple note in the text, such as "graphics to be inserted" will help eliminate confusion about missing information.
- How you would like comments and corrections noted. For example, would you like corrections marked directly on the manuscript, or listed on a separate sheet of paper?
- The date by which you need the review comments back.

Be available for dialog with your reviewers. Always include a phone number or e-mail address where you can be reached. Also, let your reviewers know you are willing to meet with them if necessary, either one-on-one or in a review meeting.

Thank your reviewers for their work, both before and after the review. A thank-you note or phone call lets reviewers know that their work is appreciated and valued. Also, if a reviewer was especially helpful, tell your manager or project leader. It is this type of recognition that promotes teamwork, makes our jobs more rewarding, and makes life in general more pleasant.

Suggestions for Reviewers

Give priority to your area of expertise. As a reviewer, you have an opportunity to offer a unique contribution to the quality of the document. Invest your energy in reviewing the document from that perspective. For example, if you are in the technical support area, you know the most frequent problems customers experience with a product. If you are a user interface expert, you'll have a good perspective on what users need to know to navigate successfully through a system.

Keep the scope of the project in mind as you review. Time and budget limitations might not permit some of the changes you feel are necessary. Calls for wholesale rewrites or inclusion of complex graphics can be very stressful for a writer under a tight deadline and limited resources. If you do feel that some major organizational changes are necessary, make a note of them as suggestions for future versions of the manual. Offer to discuss them one-on-one with the writer, while respecting the writer's expertise as a communicator.

Put prejudices aside. Occasionally, you may find your perceptions of a document colored by a bad experience with a previous project or another writer. Try to forget about the past and bring a fresh perspective to each piece you review.

Keep comments constructive. A review is your opportunity to add to the quality of a document. Writers will be far more receptive to your feedback if you offer it in a positive light. Note problems tactfully and suggest solutions if you can. Also, watch for these stylistic negatives:

- <u>Heavy-handed phrases</u>, such as "you neglected to include..." or "You failed to mention...." If you find omissions, use positive wording such as "Be sure to tell the user how to enter the correct parameters here."

- <u>Hostile punctuation</u>, such as double question marks and exclamation points. This type of puncutation communicates anger and impatience, and does nothing to solve content problems. Trust the writer to note your comments without the need for such emphasis.

- Judgmental questions, such as such as "Why isn't the list of state codes included?" or "Where is the index?". Such wording communicates hostility and puts the writer in a defensive position.

Be specific. Comments such as "No!", "Unclear," "Rewrite this," "More information needed here," or "This is no longer true" communicate only that something is wrong. They bring the writer to a dead end, resulting in frustration and additional phone calls. If you see a problem, help the writer solve it by stating exactly what needs to be corrected.

Don't burden the writer with technical questions. In the course of a technical review, several questions may occur to you, such as "Is this a required field?" or "How many access codes can you enter into this directory?" While these questions may be important, keep in mind that the writer is not a product expert and should not be expected to know answers to technical questions. If questions occur to you for which you don't have an answer, try to find the information -- or, at the very least, provide the writer with some guidance about where to find the information.

Write legibly and carefully. You will save the writer -- and ultimately, the user -- much time and frustration by marking corrections carefully on the draft. Be especially sure that items such as part numbers can be read easily. A "6" can be easily mistaken for a "0"; a hyphen for an underscore; a comma for a period. These small errors can cause big problems for users.

Keep your comments as neat and organized as possible. If you need to omit a comment you made earlier, white it out with correction tape or liquid paper. At the very least, be sure to cross out the discarded comment completely so that the writer does not accidently incorporate it during the revision.

Distinguish clearly between actual corrections, comments, and suggestions. When the time comes to incorporate review comments, the writer needs to know the specific technical corrections needed as opposed to what changes would be helpful but not necessary. You can help make that distinction clear by noting what information must be changed and exactly where on the draft it should be inserted or deleted. If you have comments or suggestions, write them in the margin or on a separate sheet of paper.

Also, explain the reasons for any suggestions you make. Doing so will communicate your concern for quality and will assure the writer that your suggestion is not merely the expression of a personal preference.[4] Don't assume that the writer will understand the reason for a suggested change.

Inform the writer of scheduling problems. If you cannot review the draft, or if you need to return it later than the specified date, let the writer know immediately so that the schedule can be adjusted, or an alternate reviewer found.

Planning for Effective Reviews

Despite the best efforts of writers and reviewers to work cooperatively together, problems at higher levels in the organization -- urgent release dates, conflicting priorities, communication breakdowns, organizational chaos, limited resources -- can make the review process extremely difficult. Solid management support plays an important role in reducing the harmful impact of these problems. In his article, "Improving the Management of Technical Writers: Creating a Context for Usable Documentation," Richard Chisholm writes:

> They [writers] must develop cordial working relations with colleagues in other departments. For this reason, it is up to management to foster creative working relationships among professionals in various departments. It is also up to management to help writers develop and maintain the interpersonal skills that will help them procure information, so that when crises arise, writers can get the information they need. [5]

He also notes that "Effective managers schedule adequate time for planning, gathering information, revising, reviewing, testing, and production."[6]

Good project management requires that we address review issues in the early stages of a project. At the planning stage, discuss with your team and your manager how reviews will be conducted and what obstacles may lie ahead. Be sure that review cycles are included in the project schedule. Use the planning stage as an opportunity to educate colleagues about the crucial role reviews play in document quality.

Conclusion

No matter what your organizational structure, everyone's ultimate job is the same -- to produce a quality product to the customer. The document review process is an important form of teamwork toward that goal. And when you make the most of that process, you play a part in your company's success.

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[3]John Brockmann, p. 257.

[4]Anderson, Paul V. *Technical Writing: A Reader-Centered Approach*. New York: Harcourt, Brace, Jovanovich, 1991, p. 487.

[5]Chisholm, Richard. "Improving the Management of Technical Writers: Creating a Context for Usable Documentation." *Effective Documentation: What We Have Learned from Research*. Cambridge, MA: The MIT Press, 1988, p. 312.

[6]Richard Chisholm, p. 313.

About the Author
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Demonstration:

Cross-Cultural Communication
of Technical Information

Presented by Alec Sutherland

Summary: Accurately translating a technical document from one language to another solves only one part of the technical communication problem. We must also strive to assure that we have achieved a successful transmission of our information from culture to culture, that our technical communication across cultures is both effective and efficient. This demonstration session will begin with a quick overview of the cross-cultural communication problem and then use examples, illustrations, and brief case studies to suggest practical approaches to solving the problem.

--The Role of Culture in Language: how culture and language are different factors affecting the transmission of technical information.

--The Role of Cultural Values: how the way a culture views itself, the outside world, technology, and information shapes the way it receives, regards, and uses technical information.

--The Role of Structure: how different cultures structure the presentation of reality and how these differences can (and should) affect the structuring and formatting of technical information.

--The Role of the Verbal and the Role of the Visual: how different cultures have different expectations of the verbal and the visual in the communication of information.

--The Role of Style: how different cultures respond to different styles in the presentation of technical information.

--The Role of Resources: where the technical communicator can turn for systematic assistance in designing and carrying out the cross-cultural communication of technical information.

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The Strategic Value of Information (Part I)
William Tedeschi

Abstract - *Most managers, business or otherwise, understand implicitly the value of the product they make or the service they provide. Do they, however, understand the strategic value of information toward the meeting of their objectives? So often the technical communicators who impart this information are considered a "necessary evil." In a time when American business is downsizing, it's often these "necessary evil" jobs that are the first to go. This presentation attempts to provide communicators with ideas, tools and approaches whereby the organizations they support will not only accept them as vital partners but seek them out as well.*

The Challenge

In our business of communications, whether it be technical, or informational, for external or internal use, for customers or employees, we generally have been quite successful at being complete and correct and usually on time. As the comedian on Saturday Night Live used to say as he impersonated President Bush, "That's good. Nothing wrong with that. Right thing to do. Need to move forward, though. Need new goals... ."

We've taken data and information in any form or condition, worked on it, transformed it, made it presentable, understandable, and useful. "Nothing wrong with that." In the traditional sphere of our professional influence, I'd have to agree. On the other hand, I continue to hear that nagging voice (neither the President's nor the comedian's, and in either case, not very funny) whispering that we technical communicators are "a necessary evil". What's worse are the downsizings in American business in which we have suddenly become the "unnecessary evils" and the first to go.

Most managers, business or otherwise, understand implicitly the value of the product they make or the service they provide. Do they, however, understand the strategic value of information toward the meeting of their objectives? Even more important, do we know how to cause them to understand that technical communicators are as valuable to an organization as the CEO or the product design engineer or their top salesperson?

It is not too late for technical communicators to look at ourselves, what we do and how we do it, and cause us to become strategically invaluable and vital partners with our clients, customers, or organization. This presentation provides the foundation and principles along with ideas, tools, and approaches whereby we will meet that sphere of acceptance.

A Self-Examination

We tend to see ourselves as writers, editors, artists, spokespersons for all customers, and the conduit for information people want and need. We believe we are great investigators who tell the truth and care about what we do and for whom we do it.

Frankly, my dears, business people could care less about those traits we hold so precious. How do business people tend to see us? Sadly, I must tell they think of us as spendthrifts, prima donnas, those @/##¦{%@# investigators, not with the program, not strategic, and having a career tied to our profession.

Where does all this perception come from? Let's look at how business people tend to view themselves. They are strategic in all of their actions, committed to their organizations, aggressive, and results oriented. Are you getting the message? Well here's more...visionary, problem solvers; and here come the "most important" characteristics. Their careers are tied to the company and everything they do is aligned with the strategic goals of their organizations.

The Fundamental Question

We've come to the fundamental question for technical communicator who reside within or serve and organization.

Do you see yourself as a communication professional, or are you fully aligned with the mission of the organization?

The more you see yourself as a professional communicator, the more isolated you will be from your organization both in your day to day operations and your professional development.

The Strategic Value of Information (Part I)

The more you see yourself as a manager and planner (of people or projects) with communication skills, the more you will be in tune with the organization's mission and objectives and the more you will be able to use those communications skills in its service.

In general, technical communicators have a tough time with the concepts of planning and managing because we are so used to responding and reacting rather than acting...it's just been the nature of our business, up until now. Business operatives call that crisis management. <u>We are perceived as not being in charge of our work.</u>

Planning and managing are the way we integrate business concepts with communications operations or activities!

Rating the Characteristcs of Our Work

I expect you are gathering why we don't fit in strategically. Therefore, before we can even determine the strategic values of our strategic opportunities for information, we need (must) align ourselves with the strategy of our organization. By the way, if I am able to convey anything through this paper, it must be the concept of ALIGNMENT.

Once our self examination is completed, we need to look at the "products" we produce. For the purposes of ease of discussion, let's use "publications" as a descriptor for any and all communication vehicles. In all candor, we should rate our technical publications on the basis of "of necessity" and "actual" for their six essential characteristics: Credibility, Immediacy, Long-Term Results, Fast Response, acceptance, and Delivery of Strategic Message. The rating system is highest, high, good, fair, and poor. (During the oral presentation we will run through this exercise, likewise for the previous exercises related to how we and business people see ourselves.)

It will come as no surprise that the tangible goods we produce rank very well in all characteristics except "delivery of the strategic message".

Strategic Thinking - Getting with the Program

In order, then, to "get with the program", we need to be aware of the types of Strategic Thinking. They are (1) Inactive, (2) Reactive, (3) Preactive, and (4) Interactive. Here is an easy way to remember them.

The inactivist tries to hold a fixed position in a moving tide; the reactivist tries to swim against it; and the preactivist tries to ride with it along its leading edge. The interactivist tries to control it. (Ackoff) Obviously, we need to take an interactive approach the principles of which are participation, continuity, coordination, and integration of activity. These principles are reviewed and related to day-to-day operations in the oral presentation.

The Tough Part

The balance of this presentation is an open forum that works through and helps the audience develop a mission statement; view their functional planning hierarchy and organizational hierarchy modeled after our old friend Abe Maslov; and most important, determine practical opportunities wherein information can contribute strategic value to your organization or client.

Transfer of Training: Getting Results Through Trainer-Manager Partnerships

by
Terry Boothman, Manager for Research and Development, and Harvey Feldstein, Vice President, Seminar Division, Logical Operations, Rochester, New York

"Unless there is first Doubt,
there can be no enlightenment"

-- Zen Proverb

If you haven't noticed, there is more than enough reason to doubt the value of some of what we trainers do. So much of the training enterprise is taken on faith, or on somewhat questionable forms of evidence such as smile sheet data or the impression that things are better now than they were before. Although we have a fully developed technology of evaluation, such methods as baseline studies or regression analyses do not come without cost and, it would be fair to guess, are not frequently deployed. We are left sitting astride a void of uncertainty, with a weakened ability to make professional training as high a priority as we would like.

What's worse, there are those in the field who question the ability of training to struggle through organizational minefields to the goal-line of measurable results. Trainers struggle heroically to design effective programs only to be stymied by inadequate management support. And when times are hard and the budget must be tightened--well, you know the story.

Taking Up the Cause

For at least the past decade, there have been efforts to both quantify and boost the impact of training. Dana Gaines Robinson and James Robinson broke ground with *Training for Impact* in 1990, and Mary Broad and John Newstrom gave us a comprehensive review of the field with *Transfer of Training* in 1992. The works of these authors, and others, take pains to provide models of training delivery that are rooted in the notion of measurable outcomes. In 1989, the computer training firm, Logical Operations, with funding from several major corporate sources, began a continuing series of studies on the impact of personal computer training. The results of the first of these were released in *Information Center* magazine in 1990 and cited in *Smart Training*, by Clay Carr in 1992.

The first of the Logical Operations studies found there were at least a handful of trainer-prescribed activities linked to higher post-training productivity. Most of the activities involved the efforts of a manager or supervisor. All were supported by dramatic and significant statistics. The findings were referenced against conclusions about the same issues found in the training literature, and checked for validity with other experts in the field. In time, the following recommendations became central tenets of a productivity management approach to training design:

Recommendations

1) Let learners explore the content of training before the learning event.

Learners who are given an opportunity to roam through the contents of a formal training program at their own pace, come to the program "loaded"--more prepared to learn. This notion of "pre-learning learning" suggests that trainees can overcome major conceptual barriers to learning when allowed to attack the material at their own pace. The prescribed activity may come as free-form practice, or a structured exercise: "find the answers to the following six questions before your class next week." In either case, the exploration period seems to provide an orientation to course content that streamlines learning.

2) Identify, before the learning event, how the training will apply to the learner's job.

Adult learning experts tell us that trainees need to see how the training applies directly to their jobs. Depending on the content of a course, the instructor may or may not be able to make the connection directly. But this can be accomplished, with a little nudging from the trainer, by a supervisor who knows something about the course contents and, we assume, something about the job. A brief meeting with their supervisor before the learning event can help trainees sort out the critical pieces and tune in to skills of key value to their work. This may operate from the same philosophy that tells us to specify learning objectives before training.

3) Change performance expectations

Managers and supervisors don't always adjust performance standards after training, if indeed they pay any attention at all. In simpler terms, a changed expectation means "I'm going to treat you differently now." The difference may come as a reward for enhanced performance, or a gentle review of work that doesn't quite make the mark. In either case, the clear message is that learning must be supported in the workplace by those to whom the learner is accountable. Unfortunately, in the world of work, learning is not always its own reward.

4) Plan practice activity

Learners may miss the opportunity to practice new skills back on the job (assuming the job itself doesn't constitute practice). Learners may discover that deferring work responsibilities to attend training leads to a fierce backlog when they return, or that managers expect them to apply new skills almost immediately. In either case, managers seldom plan for a healthy transition after a training event. In the computer world, a "protected" practice time has been useful. That could mean two-to-three days of practice off-site--even if it means allowing the trainee to pack up a portable computer and take it home.

5) Assign new tasks involving the content of the training.

Of the strategies offered, this may be the most aggressive--and least likable--for the trainee's supervisor. We shouldn't leave the application of new skills to chance; we should propel the learner into activities where the sponsoring organization can enjoy the benefits of training. If learners do this assignment *before* the training event, they once again acquire a "set," a way of marking which skills will be especially important. We assume that this process of skill identification leads to more rehearsal or to a more motivated learning effort.

Shouldering the Burden

It is obvious from this discussion that much of the burden of "training transfer" falls on the shoulders of the manager or supervisor. This isn't news; the training profession has been preaching management involvement for years. We've only failed to find more convincing ways to convey the message, and a better architecture for the training itself--a design that carefully draws the manager into the picture from the beginning. In 1991, Logical Operations, with the Association for Computer Training and Support, sponsored a second major piece of survey research. Questionnaires were sent to five thousand training professionals across the country. Questions centered around the following three themes:

1) Do you support the five strategies (identified above)?

2) Does your organization engage in the five strategies?

3) What strategies or activities separate success trainers from those who are less so?

Data from seven hundred respondents showed that they *did* believe in the strategies, but their organizations didn't practice them with particular zeal. Trainers who said they were more successful and whose efforts led to more trainee productivity, also said they were more influential as individuals. The relationship of influence to success became that of chicken to egg, but the data confirmed the conclusion that the five identified activities were strong predictors of training success.

There were other factors that separated the more successful from the less successful trainers. More successful trainers tended to be better communicators. They were more likely to talk and write to both managers and trainees about productivity issues surrounding training. They were better self-promoters, saying they were more inclined to publicize their own training successes. And they were three times as likely to offer formal training to management regarding the issues identified in this article. In short, more successful trainers are more likely to take the bull by the horns and get more management involvement in the training process.

Logical Operations is continuing its research into the 90's, and hopes that other organizations will also. Remaining questions center on which of the identified factors carry the most weight, and which are the most easily adopted by training organizations. And, of course, whether there are other key factors that can be readily applied to technical and skills training endeavors. Broad and Newstrom list over seventy transfer strategies, many of which may be considered research prospects.

And Beyond

On a deeper level of analysis, the framework of the conclusions offered here suggests another look at the execution of training services. One may come to believe, as the author does, that emphasis on transfer strategy is a better investment of trainer time than emphasis on fine-tuning the design of information delivery. In other words, building a better mousetrap does us little good if we don't also clear that path to our door. In fact, we may need to change organizational attitudes and perceptions about what training really is. Doing so will require more than our grousing at staff meetings and professional conferences; we'll have to change some of our own attitudes and priorities.

Some thoughts:

- We need to see performance change as the crux of our job. We tend to see ourselves as information providers, but not necessarily as motivators and change agents. That part of the job has become an organizational hot potato, both trainer and manager flicking it back to the other in short order. It really is our job for now, if only because we have a clearer vision and a personal stake in the outcomes.

- We need to define training differently. Training needs to be seen from the design level up as a "performance change intervention," not just an information event. If we ourselves see it that way, use different labels, and negotiate on that basis, the new scheme may start to catch on. Managers may come to us on different terms.

- We need to build a new technology. Not a technology of *information*, but a technology of *influence* in which information is one required part. That technology may be something that many of us practice now, and with certain results. Yet the outcomes are too important to leave to the maturity and experience of individual trainers. They should become basic training for all of us, and so we need to address these issues on an organizational basis.

- We need to continue research into how we can achieve more power and influence within our host organizations. If done in good faith, this can lead to more productive training models and give us a well-deserved boost.

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Communicating Change/Changing Communication

Diane M. Gayeski

Abstract - *This workshop provides an overview of new management trends, theories, and practices and matches them with new communication paradigms and media. Participants will learn what new technologies and techniques are available, what their potential benefits and costs are, and how to introduce them to their organizations so that they are aligned with its culture and goals. Examples of communication projects using these techniques and technologies are presented, and participants apply these case studies to their own professional development and department plans.*

Organizational Change

As our organizations grapple with changes such as:

- downsizing
- total quality management
- workplace and customer diversity
- ecological consciousness
- global economics
- self-managed teams and
- employee empowerment,

we need not only to communicate those changes but to change the ways we communicate. Traditional top-down, one-way, linear, and slow communication systems will need to be replaced with on-line, interactive, participatory, and rapid information technologies. What are the challenges, opportunities, and new skills that await technical communication professionals?

How we must communicate and *what* we must communicate

Despite these radical changes (or attempts to change) the fundamental structure and culture of organizations, communication systems (and communicators) have generally not kept pace. Communication departments are generally regarded as protectors of the *status quo*, and even those who are engaged in developing messages about change are generally not changing themselves.

For organizations to remain competitive and vital, their old top-down, linear, rigid, controlling, and slow channels of communication need to be "re-wired". This re-wiring consists of:

- a new communication "culture" - policies and practices and incentives
- new communication tools which support collaboration rather than just indoctrination
- unification of communication functions / distribution systems / themes, including computers, telecommunications, training, marketing, PR, advertising, etc.

To do this, we need to develop "Renaissance Communicators" who understand, develop, and control human and mediated communication RULES AND TOOLS. Merely attempting to change the rules without changing the tools makes behavior change difficult; people will resort to their old ways because the old systems make it easy to do so -- in fact they may support nothing else. Merely introducing new technologies without changing the culture and incentive systems won't work either.

What new technologies and policies can help us?

We need systems which support our organizations' cultures and goals. For enterprises which value employee participation and collaboration, two-way communication systems which are easily accessible are appropriate: e-mail, teleconferencing, and computer-based collaboration and audience participation tools are examples. Valuing diversity as a goal can be put into action by interactive multimedia training and information systems which provide information in ways which are tailored to the interests, styles, and even languages of the users. Employees can become empowered through access to extensive databases and can have their decision-making supported by tools such as expert systems and electronic performance support tools. Finally, policies such as voluntary access to training and rigorous evaluation of communication interventions are aligned with empowerment and total quality management.

Case studies: how to get started

There are some ways in which communication professionals can "rewire" their organizations:

- establish links and unified strategies with MIS, telecommunications, and human resources (Example: Espar Products, Marine Midland Bank orientation, and US Healthcare Service Center);
- budget for R&D projects (Example: Amway Corp. and Bank of Montreal);

- use inexpensive and widely adopted communication tools such as electronic mail and consumer video to facilitate communication (Examples: New York State Electric & Gas, and Consolidated Diesel);
- plan for a new electronic communication conduits capable of sending text, data, voice, graphics, and motion video (Example: American Express and Federal Express);
- help executives use new technologies to support their efforts in a new style of management (Example: Dow Chemical)
- establish communication as a "value added" commodity and as integral to production (Example: Genigraphics)
- develop new names and policies for training departments (Examples: New York State Electric & Gas, Bank of Montreal, ISVOR Fiat)

Promises and pitfalls of these new technologies

As enticing as new multimedia technologies may be, more projects have failed than have succeeded over the past decade. The major reasons for these failures include a lack of standardization of equipment, poor design and management skills, an inability to show a return on investment for the dollars and time spent, and a misalignment of approaches with overall business goals and cultures. Most successful pilots have used the synergy of in-house staff coached by consultant-producers who can help them get a first project off the ground smoothly and professionally while allowing the organization to develop its internal skills for use in subsequent projects.

Creating an action plan

Communication professionals need to take a leadership role in evaluating and adopting new technologies. However, rather than selling a new medium by its technical features, we should identify major organizational needs, goals, and values and where are current communication practices may be out of alignment. Only then can an appropriate pilot project be created which is not only effective in its content, but is also powerful in its inherent philosophy and nature.

Communication alignment

Question 1: With which of these initiatives or themes is your organization involved?

- ☐ Total Quality Management (TQM)
- ☐ Employee empowerment
- ☐ Teamwork
- ☐ Just-in-time manufacturing
- ☐ Diversity awareness
- ☐ Environmental consciousness
- ☐ Participatory decision-making
- ☐ Self-managed teams
- ☐ Continual learning
- ☐ Global manufacturing/marketing
- ☐ Downsizing/rightsizing
- ☐ Management of information overload

Total ____________

Question 2: Which of these things are true of your organization?

- ☐ Employees "sent" to courses by managers
- ☐ Documentation/training based on input from one or two SMEs
- ☐ Most company news written by communications staff
- ☐ Print-based policies and procedures manuals
- ☐ More messages sent from the top down than from the bottom up
- ☐ Communication professionals rewarded for the amount of materials they produce
- ☐ Training and documentation generally presents one "best" way to approach a task
- ☐ Communication materials do not include or acknowledge input of employees
- ☐ Most training courses led by one instructor
- ☐ Most formal information transmitted by print
- ☐ Documentation and training can't keep up with new product / policy introductions
- ☐ Employee communications, advertising/PR, training, information systems, media production all separate departments
- ☐ Communication interventions evaluated by "smile sheets"
- ☐ Most formal meetings with management consist of announcements
- ☐ Most media generated by requests from managers
- ☐ Most training done away from actual worksite

Total: ____________
Score: Question 1 x Question 2: _______

Communication Change Action Plan

Most severe misalignment

Change in policy

Change in technology

Objective

Who's on the team?

How would an intervention be evaluated?

What outside resources are necessary?

About the Author

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Diane M. Gayeski is a researcher, professor, and practitioner specializing in the application and management of new information technologies. She is a frequent conference speaker, the author of six books and over 75 articles in this area, and is active in consulting with clients in the public and private sectors internationally.

Presenting Technical Information to an International Audience

Lisa A. Moretto and Ron S. Blicq

Abstract- *The lifting of physical and political barriers between countries has encouraged more North Americans to participate in international conferences held overseas. Technical communicators are particularly in demand, because professionals in other countries want to learn about the techniques we use in document production and information processing. Some also want to learn how to communicate more effectively when they write to "the west." Speaking to foreign language audiences demands careful and thoughtful preparation, a knowledge of the culture of the host country, skill in speaking through a translator, the ability to be flexible and adjust readily to unexpected conditions, and the willingness to research and understand the audience's needs and expectations.*

Introduction

As part of an international thrust to establish communication between European and North American societies, for the past two and a half years the Professional Communication Society of the IEEE (Institute of Electrical and Electronics Engineers Inc) has taken part in information technology conferences in Russia, Estonia, and Germany. In each case the conference was conducted primarily in the language of the host country, with the PCS members' contributions being translated as they spoke. In 1992 the PCS members also presented courses in technical and business communication for engineers, economists, and business administrators in Moscow and Tallinn. Our experience in making these presentations opened our eyes to the difficulties inherent in addressing non-English-speaking audiences.

The enthusiasm we and our information received has convinced us that many more opportunities will occur for North American technical communicators to travel and speak abroad. Our purpose in this paper is to offer suggestions, based on our experience, for making presentations before foreign-language audiences, and concurrently to alert potential speakers to some of the constraints and cultural differences they may encounter. The paper will cover three main topics: how to prepare; how to work with a translator; and how to speak in three different settings: at a conference, at a business meeting, and as a course leader.

Preparing to Speak

The guidelines that apply when speaking to an English-language audience also apply to an international audience. You have to identify who you will be speaking to, their level of education, their profession, their age, and how much they are likely to know about your subject. You should talk at, not above or below their level, and prepare clear and relevant visual aids. You must deliver your talk extemporaneously rather than read it, and speak slowly and clearly. And during the question period, as a courtesy you should repeat each question to ensure everyone has heard and understood it. However, for an international audience you have to pay more than normal attention to some of these factors, and consider additional factors that will enhance audience understanding.

Considering Your Audience

If you will be speaking at a meeting of a technical society, such as **tekom** (Germany's equivalent of the STC), identifying who will be in your audience is not difficult. But if you are giving a general address to, say, a meeting of the Russian **A.S. Popov Society** (which has a broad spectrum of technical and nontechnical members), determining who will be there can be a problem. You can ask the contact person who is making arrangements in the host country, but often he or she either will not know or may not understand the importance of your question (or language barriers or inadequate mail and electronic communication methods may intrude). Even if you are told, be wary: at one location we were told we would be speaking to 15 technical specialists, yet when we faced them we discovered they were 64 undergraduate students!

Ask your host committee to identify what they want or expect you to talk about, what they feel the audience will want to hear, and how long your presentation is to be. Use this as a starting point, and then adapt your information to fit the audience's needs just as you would for an English-speaking audience. But severely limit the amount of information you plan to convey, because translation, and sometimes the need to explain a point in more depth than you expected (often prompted by audience questions), can use up a lot of time.

Avoid referring to North American situations or events which are familiar to you but may not be familiar to your audience. Prepare to explain a point or a situation in a context they will understand and can relate to. For example, if you will be describing how a letter of transmittal can serve as an Executive Summary, do some research so you can refer to a writer and reader who are in cities and businesses in the host country. Give them typical local names such as Svetlana Ilyavich in Minsk and Boris Lakayev in Simferapol, rather than Jane Sparkes in Buffalo and Phil Green in Sacramento.

Learn some of the business and social customs of the country where you will be speaking. In many countries your audience will expect men to wear a dark business suit and black shoes, and may consider it a slight if a male speaker wears a sports jacket and slacks with brown shoes. Similarly, in some countries a male speaker would be considered ill-mannered if he were to put his hands in his pockets while he addressed the audience. Take plenty of business cards, ideally printed in two languages (many foreign professionals identify themselves in English on the reverse side), and in some countries expect to shake hands frequently. In eastern Europe, especially, people regularly greet one-another with a handshake on meeting for the first time each day, and often again on parting at the end of the day.

Selecting Your Visual Aids

Tell your host committee what platform equipment you will need *early* in your preparations, and ask them to confirm that it will be available. But don't bank on their assurances. In some countries overhead and slide projectors--and particularly spare bulbs--are difficult to obtain and may not be exactly what you are accustomed to. We asked for both a slide projector and an overhead projector in Tallinn, with two screens because we wanted to show slides and transparencies simultaneously. Our hosts assured us that both would be available, and they were. What we had not anticipated was that the "slide projector" would be a lens assembly that clamped over the projection lenses of the overhead projector, and so only one could be used at a time. Consequently, try to keep your equipment needs as simple as possible.

Resist the temptation simply to pull some of your best slides and transparencies from your files. For an international audience you will need to prepare new visuals that are entirely self-explanatory. If you puzzle your audience by screening confusing visuals, you may lose their attention while they try to work out what the visual is supposed to mean. And it will probably be too difficult to explain the visual through the translator (assuming you even know it needs explaining), and too time consuming.

Ideally, prepare two sets of visuals, one in English and one in the audience's language. Your audience will understand your visuals better, and will particularly appreciate the effort you have invested in trying to help them. You will have to start preparing early, because first you have to find a local translator capable of converting your idioms and technical terms into the foreign language (not every translator can do this). You may be able to send your English-language originals to the host country for translation, although in practice we have rarely found this to be a practicable solution.

We recommend preparing overhead transparencies (foils) rather than 35 mm slides, for three reasons: most host countries seem able to provide an overhead projector more readily than a slide projector; the slide cassette holders and transport mechanisms in foreign slide projectors are often difficult to manipulate and may not be compatible with your slides (carousel-type projectors are rarely available); and transparencies give you greater freedom to change the sequence or omit visuals while you are speaking.

Preparing Handout Information

Handout information can be a summary or abstract of your presentation, the complete paper, a list of references, exercises and working notes, or even a textbook (the latter are used more often when teaching a course). Be prepared to take plenty of handouts, because your audience will be eager to take them away to study in more depth. They will also be looking to see how you have written and presented your information.

Preparing a paper for an international conference is similar to preparing a paper for an STC conference: you submit an abstract initially and then send the paper in advance to the conference site, to be printed in the Proceedings. Most international conferences allow speakers to present their papers in either English or the host country's language, and also to provide the written paper in either language. Although at first this seems to simplify preparation, there are some constraints.

Many foreign-language professionals read English better than they speak it. Be careful, however, when using idioms and technical jargon. You can readily write that a computer has *x* number of "megabytes of memory in RAM," but you should avoid saying that working with the 4Tell software "proved to be a pain in the neck." Similarly, avoid using acronyms and abbreviations (such as LAN, DEC, and WYSIWYG) unless you first clearly define their meaning. Particularly avoid using the same word--such as "appropriate"--in two different contexts: you will confuse your readers if in one place you write "...you first have to *appropriate* additional memory," and elsewhere write "...be sure to select the *appropriate* software."

As a courtesy to your audience, prepare an abstract, have it translated into their language, and plan to distribute it before you make your presentation. (In some instances the conference organizers may combine the abstracts into a booklet, and distribute the booklets to delegates at the start of the conference.) The abstract should be longer than we are accustomed to--about 1 to 1 1/2 pages--and is comparable to the executive summary that prefaces many formal reports.

Prepare a reference list of journals, books, videotapes, and other documents pertaining to your topic and distribute it after your presentation (but check first that the documents are available in the country where you will be speaking). This will be particularly appreciated by audiences in eastern Europe, who have been starved of new information for decades. For example, we discovered in Russia and Estonia that their textbooks on American and British business writing protocol were more than 30 years old!

If you can carry them, take some new books for specific hosts, plus back issues of STC's *Technical Communication* and *Intercom*, the IEEE PCS's *Transactions*, and the ABC's *Journal of Business Communication* for general distribution. Alternatively, provide addresses for them to write to, to request copies. Yet bear in mind that addresses are useful only in countries where there is a reliable mail service to and from North America.

Working With Your Translator

The person who translates your words as you speak is the most important person in the room! A good translator can help you create a strong, warm interface between yourself and your listeners. A poor or unprepared translator will do no more than parrot your words, with little enthusiasm or interest. Because your translator will represent you to your audience, take the time to develop an empathetic understanding between the two of you. Meet the translator before your presentation--ideally the day before--and brief him or her about your subject and your approach to presenting it.

Identifying the Translation Method

You first need to establish whether you will be using simultaneous or serial translation. In simultaneous translation, the translator sits apart--usually in a booth--and listens to your presentation through headphones. As you speak, he or she catches the sense of your words and almost immediately translates them, speaking into a microphone so that the audience hears them through headphones. In serial translation, the translator sits near you, facing the audience. You speak in bite-size compartments of information, and then pause while the translator repeats your words in his or her language.

Although simultaneous translation is faster and so seems preferable, in effect it tends to "distance" you from your audience, who are concentrating on the translator's words coming through their earphones. In serial translation, the audience listens first to you, and then to the translator, and so much more readily sees your body language and hears the inflections and enthusiasm in your voice. The proximity between you and translator also helps the translator feel more personally involved in your talk.

Both modes require that you adjust the pacing of your presentation. In simultaneous translation you have to speak more slowly and inject more short pauses to help the translator keep up with you. In serial translation you may speak a little faster, but only in short bursts (if you give long bursts, the translator will be unable to remember all your words and so will transmit only a digest). And you should try not to point to a particular part of a visual as you speak, because neither mode of translation is completely synchronous and your translator cannot point to the visual as he or she speaks.

Briefing the Translator

You can expect to spend at least an hour with your translator. Describe your talk and its purpose, outline your speaking plan, and provide a glossary of any technical or unusual words you will be using. If you will be asking questions, or inviting questions from the audience, describe how you will do it so the translator can become an integral part of the questioning. If you will be teaching a course, describe the exercises the audience will have to do and how the translator can help you implement them.

In particular, show the translator all of your slides or transparencies, describe what they are to convey, and outline how and when you will use them. Ask whether the translator will be able to see the screen and, if not, give him or her paper copies of all your visuals (these should be brought with you, because it may not be possible to make copies at the site).

Finally, establish what will be a suitable speaking speed and, if you will be using serial translation, an acceptable length for a typical "bite" of information.

Making Your Presentation

Regardless of whether you are presenting a paper, attending a meeting, or teaching a course, have a contingency plan. Often, the situation you encounter may differ from the situation you expect. You may face a different audience, be presented with strange, awkward, or non-existent platform equipment (or equipment that arrives late), or discover that the length of your presentation will be much shorter than you expected. The key is to be flexible, ready to adjust to the conditions.

Ask if you can examine the platform equipment in advance. Check that the projector is operational and has a spare bulb, that it will accept your slides, and that the room can be darkened sufficiently. Yet, even with these precautions, you may still be taken by surprise: in Kabli, Estonia, just as one of our party stood up to speak, the sun broke through the overcast and streamed through a skylight onto the screen, effectively preventing the speaker from using his transparencies.

Be ready to adjust the pacing of your presentation to accommodate unexpected translation difficulties. Allow more time than normal for questions, partly because they have to be "processed" through the translator, and partly because you may have to answer more questions than you anticipated. In Moscow we found that the audience tended to view us as "experts" on subjects even only remotely connected with our presentations, and so used the opportunity to gain knowledge on a much broader range of topics than we had expected.

Your audience will particularly appreciate any attempt you make to speak to them in their own language. Try learning something about the host country's language, sufficient to pronounce words correctly even if you cannot carry out a conversation. Learn enough so you can read some of the words aloud on your foreign-language visuals. Or, better still, open your presentation with two or three paragraphs delivered in their language. (Write out a greeting and some opening words in English two months before leaving home, have them translated, and then memorize them. Be coached by someone who knows the language so that you will speak your opening words with the correct pacing and inflections.) We felt nervous standing up to do this, but heard later from our hosts in both Russia and Germany that our efforts had endeared us to our audiences.

Speaking at a Conference

Present your paper just as you would in a North American setting, but adjust the speed of your delivery to suit both the translator and the audience. Remember that some listeners who are reasonably competent in English will prefer to hear what you are saying rather than listen to the translator's interpretation. For them, speak a little more slowly and distinctly, and avoid using complex or unusual words. And if you are using serial translation, check that you are speaking to and looking at the audience, not at the translator.

Expect a different level of audience response than you are accustomed to. Some foreign audiences may seem silent and unresponsive, but this does not mean they are not interested in what you have to say. In particular avoid using humor, because different cultures see humor in different ways. If you relate what *you* think is a humorous anecdote, you may puzzle your audience. They may not recognize you are using humor, and so consider your remarks to be a rather strange part of your presentation.

When the audience asks questions, you will probably hear a much longer question from the audience member than the translator gives you in English. Unless the question is straightforward, describe your interpretation of the question and ask (through the translator) if you have understood the question correctly. This can prevent you from unknowingly providing an answer that does not properly respond to the question. (A North American audience will quickly tell you if you have missed the point, whereas many foreign audiences will not.)

Presenting Information in a Business Setting

Know something about the business structure and culture prevalent in the country you are visiting. When presenting information at a meeting, expect formalities to be much more evident than in North America. In many foreign countries you will be addressed by title (Dr., Mr., Ms., *etc*), and you would be considered impolite if you were to use your hosts' first names rather than their titles. Similarly, in many countries a meeting is preceded by coffee and soft drinks served while everyone sits around the meeting table, during which only general conversation is evident (again, you would be considered impolite if you were to leap into business conversation until the formalities are over). Be prepared for lengthy introductory preliminaries that may require you to adjust the length of your presentation.

Unless you have been assured that everyone will be able to speak English, before you go to the meeting ask for a translator to be present. Also ask your hosts to write down the names of the people you will meet, and then practice pronouncing them correctly. Take an agenda with you but produce it only if, after the meeting has started, you recognize that your hosts have not prepared one.

Understand the business situation prevalent in the host country, the effect it has on the work environment, and the constraints it imposes on many factors we take for granted. For example, when one of our party visited a Russian company to enquire about the quality of documentation they received with the electronic and electro-mechanical products the company was using, she was surprised to learn that no documentation had been provided with *any* of the products the company had purchased.

Teaching a Course

Many of the factors outlined earlier for presenting information at a conference or business meeting apply to teaching a course. In particular, be ready to adjust course content and pacing to fit the time you have available after the setting up and introductory preliminaries are over. Similarly, be ready to make adjustments during your presentation, when you have met your audience and have more clearly identified their needs and expectations (recognize that your, your hosts', and your course participants' expectations may differ). Be sufficiently flexible so you can make these changes without the audience being aware they are being made. We have yet to teach an international course that has exactly fitted our expectations, or has offered the length of teaching time we were led to expect.

Preparing models and exercises for courses poses special problems. You have to create scenarios that are not only relevant but also credible from the course participants' viewpoint. For courses taught in Russia we had to drop many of our most useful exercises because the course participants simply would not have related to them (one concerned a problem with a personal automobile, and another a microwave oven, neither of which would be owned by the people we were to face). In the end we chose to write a 70-page textbook complete with Russian-based scenarios, locations, equipment, and people, and have it translated by the host organization. It became the course workbook.

It's when teaching courses that dual-language transparencies prove particularly valuable. We discovered that some participants' knowledge was sufficient for them to read the English-language visuals (and they told us they *preferred* to, because they were seeing exactly how we prepared information "in the west"). Others, whose knowledge of English was minimal or nonexistent, had to read the home-language visuals and depend entirely on the translator's ability to convey our meaning accurately.

Be ready to ask questions more frequently than you would for an English-speaking audience, so you can check periodically that the participants have understood the concepts you are teaching. Similarly, encourage questions from the audience, as a further check. If at first they seem unresponsive, use exercises and questions to encourage them to become active participants. With some cultures this may take longer than with others.

The translator becomes even more important during a course, because he or she has to translate questions and answers in both directions. Try to give your translator an occasional break, particularly when the participants are working on exercises. We were lucky with all of our translators, but one in particular--in Moscow--became almost too interested in the subject we were teaching ("How to Write and Present Reports"). More than once, when the course leader was presenting an especially interesting piece of information, the translator would nod and murmur "Uh-huh" in agreement! Each time the course leader had to turn to him and say: "Sasha: *Tell* them!" They would both laugh, and so would the audience, which helped loosen up personal interaction between instructor and audience.

Conclusions

Wherever we have spoken, either at a conference, business meeting, or when presenting a course, we have been overwhelmed by the eagerness to learn, the willingness to help (particularly with platform equipment our hosts felt did not meet our expectations), and the warmth and friendliness with which we were greeted. Often, our presentations went on much longer than we had anticipated because of the participants' interest in what we had to say and in ourselves as visitors. Similarly, after the presentations were over, we were regularly approached by individual participants, who wanted to "meet, greet, and chat."

Will we go again? *Yes!* Readily and willingly. We have made many friends--not just acquired associates--everywhere we have been, and we very much want to return, to meet them again.

About the Authors

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Lisa holds a B.S. in Technical Communication from Clarkson University and for the past seven years has been a technical writer and product documentation engineer in both the U.S. and U.K. She has taught technical communication courses for both industry and the IEEE Professional Communication Society. Lisa is a member of the IEEE and the STC.

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Lisa and Ron are currently co-authoring the second edition of the IEEE Press book ***Writing Reports to Get Results.***

Session 2

STRESS... NOW!

Kitty Aughey

Abstract–*Stress is here! Let's take a look at what we can do to relieve it. This presentation will examine simple techniques for improving our sense of well-being. Come to accept the fact that you have stress and that stress is not a 20th-century malady. Learn some stress-reduction strategies taken from history. Participants will enjoy activities that will send them away with coping skills they can put to use immediately.*

Introduction/Acceptance

Stress is the way we react to change. While we cannot always control change, we can control our reactions to it. *On a clear day you can see forever*—so let's acknowledge our stress and explore ways to cope with it.

History/Background Preparation

The fast-paced 20th century does not own stress. Ancient cultures also had difficulties with heavy workloads, poor health, aging parents, illness, interpersonal conflicts, death, money worries and inadequate housing. (And, let's not forget famine, wars, floods, tornadoes, locusts, lions, and bondage.) We will look at ancient, and not-so-ancient, stress-producing situations.

Treatment/Strategies–Activities

From Greco-Roman baths to hot tubs, incense to potpourri, wind chimes to walkmen, meditation to biofeedback, herbs to vitamins, yoga to aerobics, walking to treadmills, acupuncture to the power of touch, and fasting to low-fat diets, treating stress is not very different in 1993 than it was in 293 or 1693. Let's look at, and benefit from, some historical stress treatments.

Conclusion/Well-Being

Admitting that stress is a major factor in your life, and everyone's life, is the first and greatest step toward coping with it. Know yourself! Then find stress-reduction techniques that are simple and comfortable for you, and use them daily. Relax, focus on a positive attitude, and enjoy an earned sense of well-being.

Presenter Data

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A senior member of STC and Immediate Past President, Kitty has served the Rochester chapter as two-term President, Vice President, Seminar Manager, Membership Manager and Bylaws/Nominating Manager. She is a candidate for the Society Nominating Committee and a member of the Society's Leadership Training and Development Committee. As manager of a publications group at Kodak, she is no stranger to change and its accompanying stress.

Three Mind Maps for the 1990's Technical Communicator

Jean S. Doremus, CSP

Abstract

Three subjects are explored and a new spin put on them. New ways of using organizational theory, communications techniques, and project life cycle concepts can empower the knowledge worker of the 1990's. Today's Technical Writer needs to try new strategies for increased productivity and profitability in order to remain in the mainstream. This applies to professional-level employees, consultants, and managers of technical communicators especially those who work in groups and/or project teams.

Organization

Some overall concepts are described.
This leads to some specific examples that illustrate the broad concepts.

- **Mail Meetings; a Communications Tool**
  vs. old-fashioned minutes taking

- **Prototyping and the Technical Writer**
  vs. the revolving door of endless re-writes

- **Project Teaming/Leading**
  vs. joining the team at the end of the project

Included:
The presenter will incorporate the following:

- References to two major 90's books relating to communication and organizational theory.

- Humorous graphics collected over the years that illustrate points.

- Viewpoints and issues based on interviews with personnel working with groups, teams, and projects.

Overall Communications Concepts

Figure 1.

Dr. W. Edward Deming says: (*The* Pioneer of the Total Quality Movement)

"The prevailing system of management has destroyed our people. People are born with intrinsic motivation, self-esteem, dignity, curiosity to learn, joy in learning. The forces of destruction begin with the toddlers—a prize for the best Halloween costume, grade in school, gold stars—and on up through the university. On the job, people, teams, divisions are ranked—reward for the one at the top—punishment for the one at the bottom."

"Instead the job of management in education, industry, and government should be the optimization of a system [not its fragmentation into Management By Objectives, quotas, incentive pay, business plans, put together separately, division by division]. Peter Senge's book *The Fifth Discipline*, from which I have learned much, is a good place to begin."

Figure 2.

From Chapter 5—A Shift of Mind *The Fifth Discipline*

"There is something in all of us that loves to put together a puzzle, that loves to see the image of the whole emerge...." Systems thinking is a discipline for seeing whole. It is the framework for seeing interrelationships rather than things, for seeing patterns of change rather than static "snapshots."

"It is a set of general principles—distilled over the course of the twentieth century.... It is also a set of specific tools and techniques, originating in two threads: in 'feedback' concepts of cybernetics and in 'servo-mechanism' engineering theory dating back to the nineteenth century.... "

"Today, systems thinking is needed more than ever because we are becoming overwhelmed by complexity. ....humankind has the capacity to create far more information than anyone can absorb, to foster far greater interdependency than anyone can manage, and to accelerate change faster than anyone's ability to keep pace."

"I call systems thinking the fifth discipline because it is the cornerstone that underlies all of the five learning disciplines of this book."

Peter Senge, Director of the Systems Thinking and Organizational Learning Program at MIT's Sloan School of Management.

Figure 3.

The Laws of the Fifth Discipline
Peter M. Senge, *The Fifth Discipline; the Art and Practice of the Learning Organization*, Doubleday Currency, 57-67, 1990

1. Today's problems come from yesterday's "solutions."
2. The harder you push, the harder the system pushes back.
3. Behavior grows better before it grows worse.
4. The easy way out usually leads back in.
5. The cure can be worse than the disease.
6. Faster is slower.
7. Cause and effect are not closely related in time and space.
8. Small changes can produce big results—but areas of highest leverage are often the least obvious.
9. You can have your cake and eat it too—but not at once.
10. Dividing an elephant in half does not produce two small elephants.
11. There is no blame.

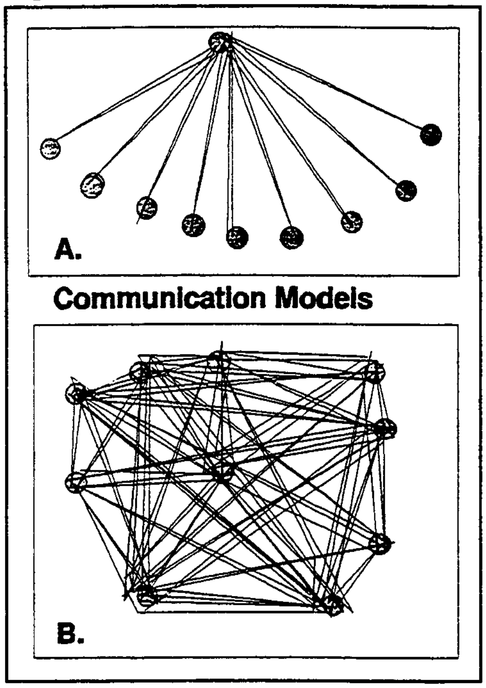
Figure 4.

The Art of Seeing the Forest and the Trees
An exercise based on your theory of why People Express (airline) failed.

Fleet	**Human Resources**	**Competitive Factors**
Planes Capacity of Aircraft Routes Scheduled Flights Competitor routes & flights Service hours per plane/ per day Fuel Efficiency	Service Personnel Aircraft Personnel Maintenance Personnel Hiring Training Turnover Morale Productivity	Market Size Market Segments Reputation Service Quality Competitor Service Quality "Load Management" Competitor Fares
Financial Variables	**"Policy Levers"**	your theory based on trying to see the Forest and the Trees:
Revenues Profit Cost of Plane Operations Cost of Marketing Wages Growth Rate Debt Interest Rate	Buying Planes Hiring People Pricing Market Expenditures Service Scope (range of services to offer)	....

Seminar Participant's Notes:

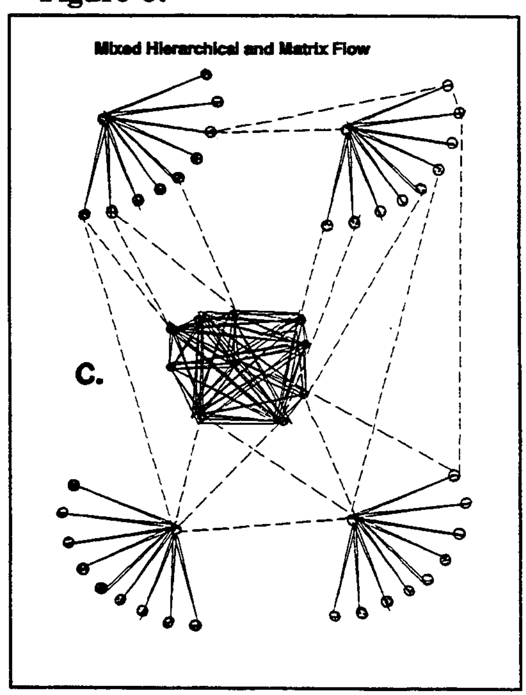
Figure 5:



More efficient initially

More difficult to handle but
much more effective if properly managed

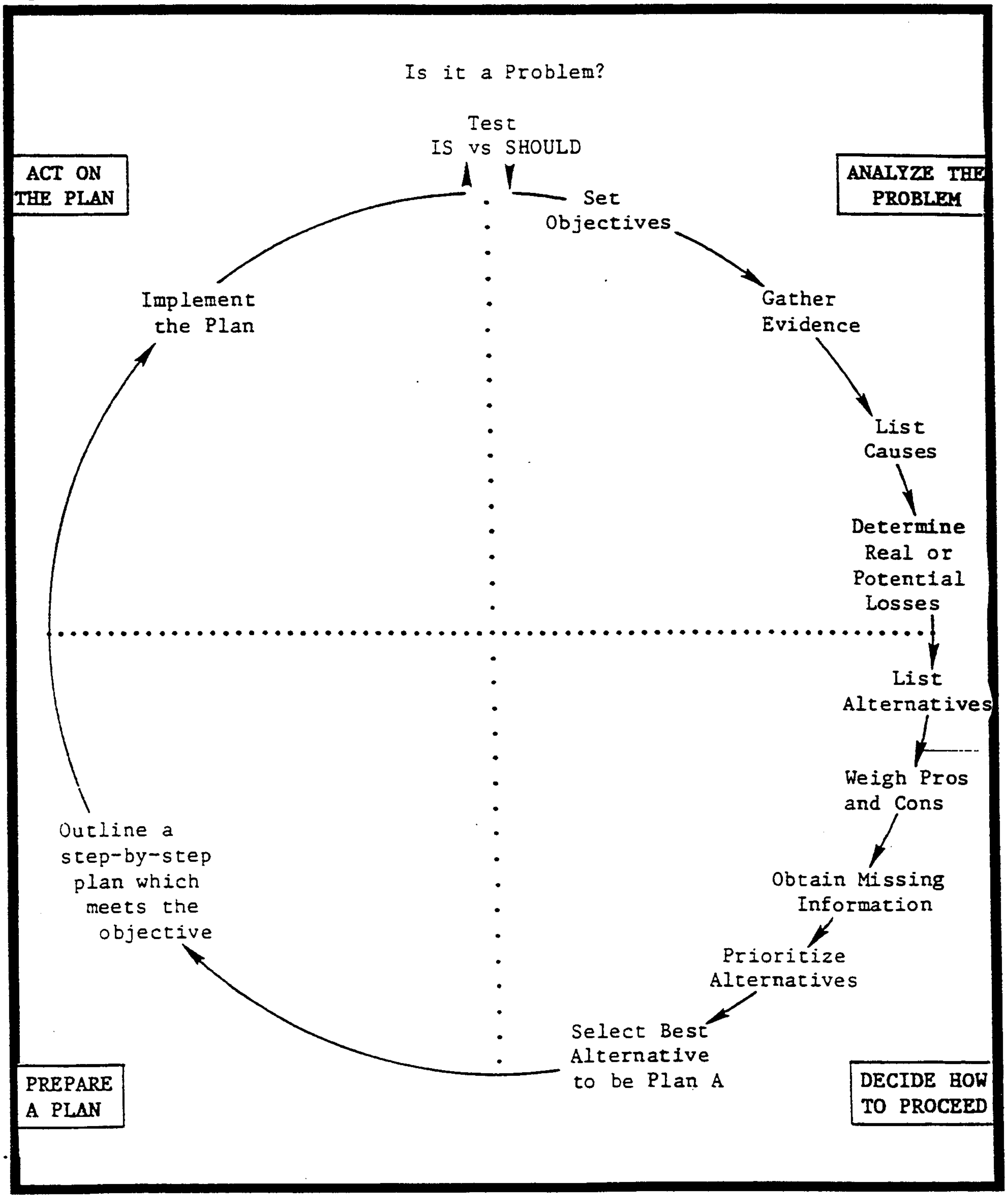
Figure 6:



Sample of best of both models combined

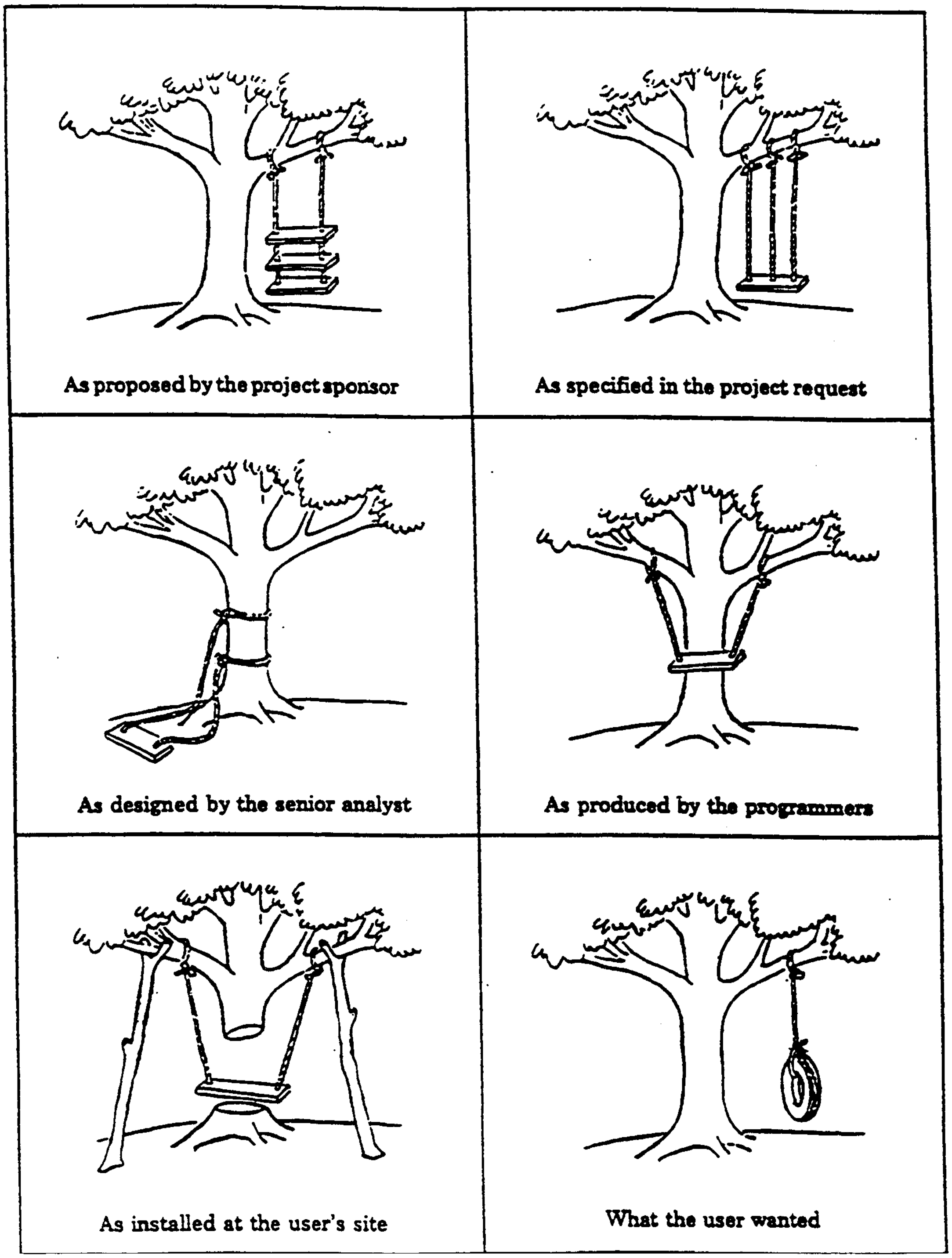
Problem Solving and Decision Making

Figure 7:



Why Not Create a Prototype?

Figure 8:



As proposed by the project sponsor

As specified in the project request

As designed by the senior analyst

As produced by the programmers

As installed at the user's site

What the user wanted

Why Not Create a Prototype?

Figure 9:

"Can you make one teeny-weenie change? We'd like Millard Fillmore instead of Teddy Roosevelt."

Figure10:

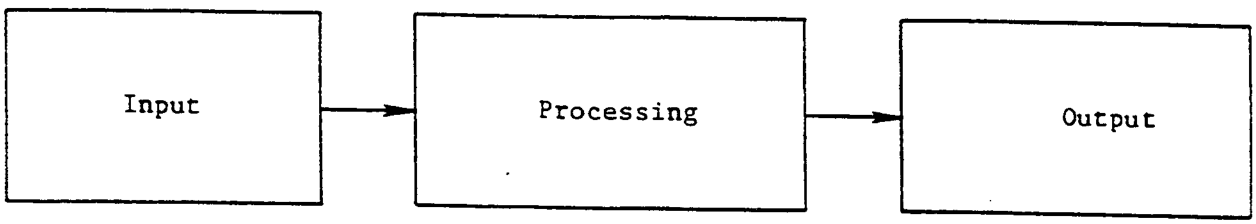
"This isn't exactly what I had in mind... I was hoping for something a little taller."

Why Not Create a Prototype?

Figure 11:
Prototyping and Feedback Loops
(J.S. Doremus, CSP, 1989)

Good input will result in good output

- Good input is complete, timely, accurate, etc.

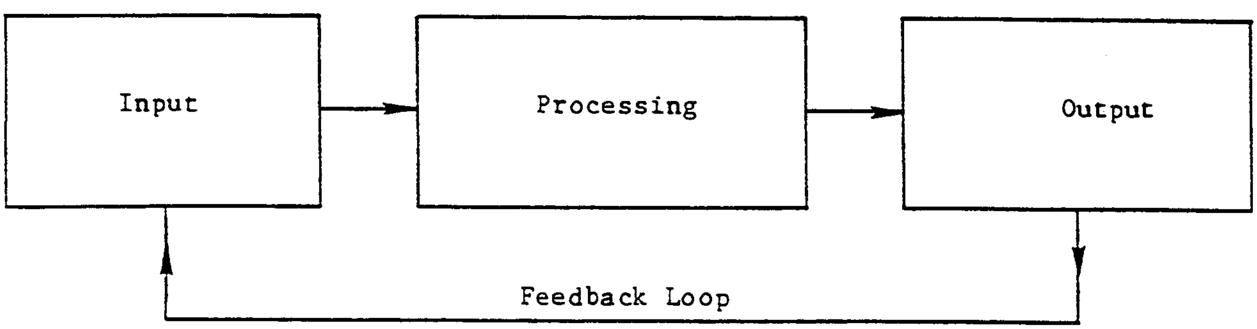


Protyping (as an analytical tool)

Create anything that will be a model (or a part of an original model) that may be used to pattern the ultimate system.

If this prototyping system is used continuously, all interested parties will have an ever-evolving picture of the ultimate result.

Examples: memorandum of understanding
sample input or sample output
processing specs



Create a feedback loop by continuously prototyping during the development of the system. The process helps assure the quality of the input, processing, and output.

Was There A Project Plan?

Figure 12:

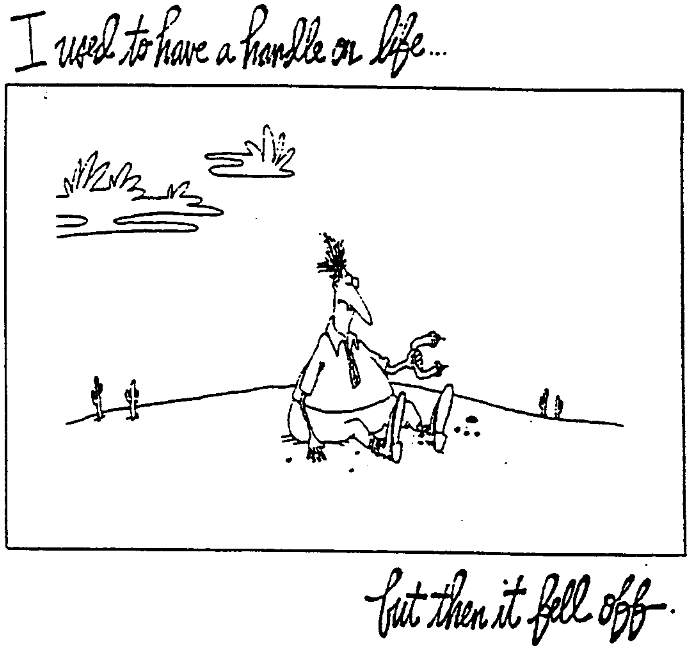
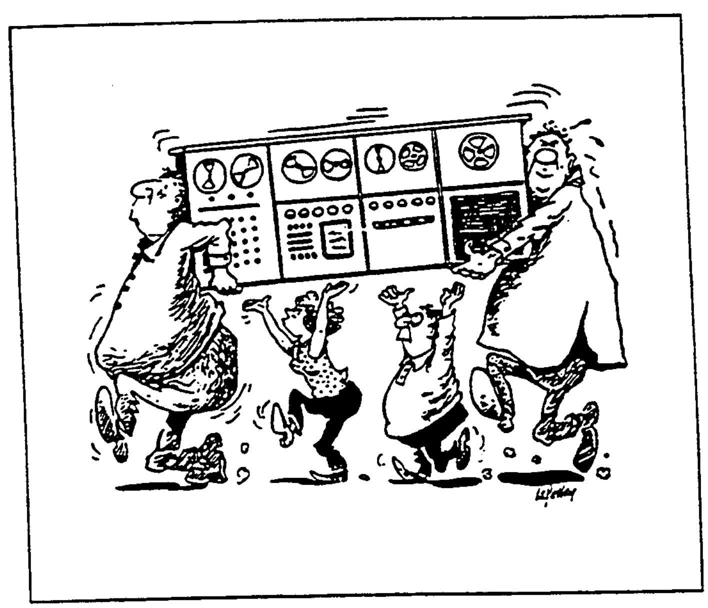


Figure 13:



Get the right people involved

Was There A Project Plan?

Figure 14:

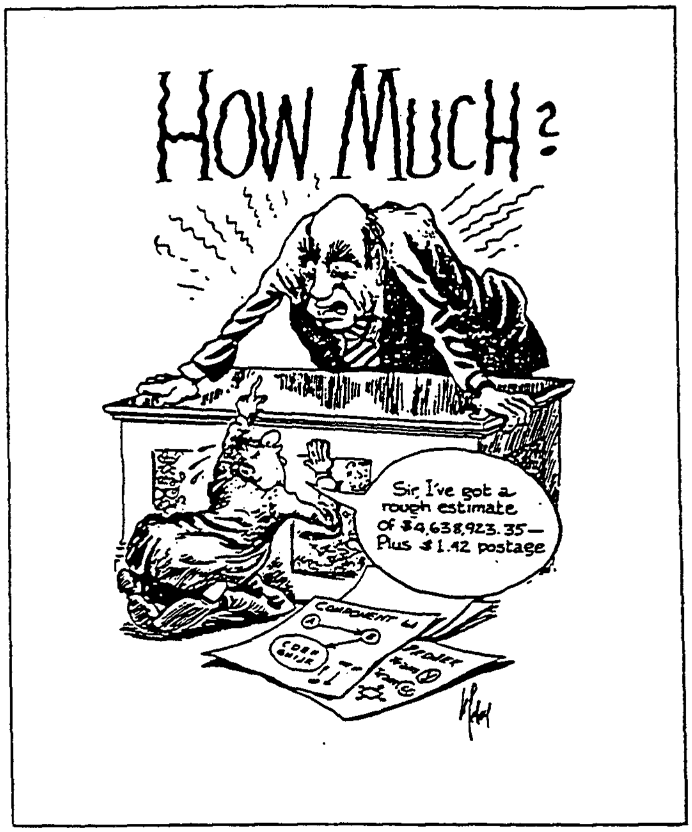
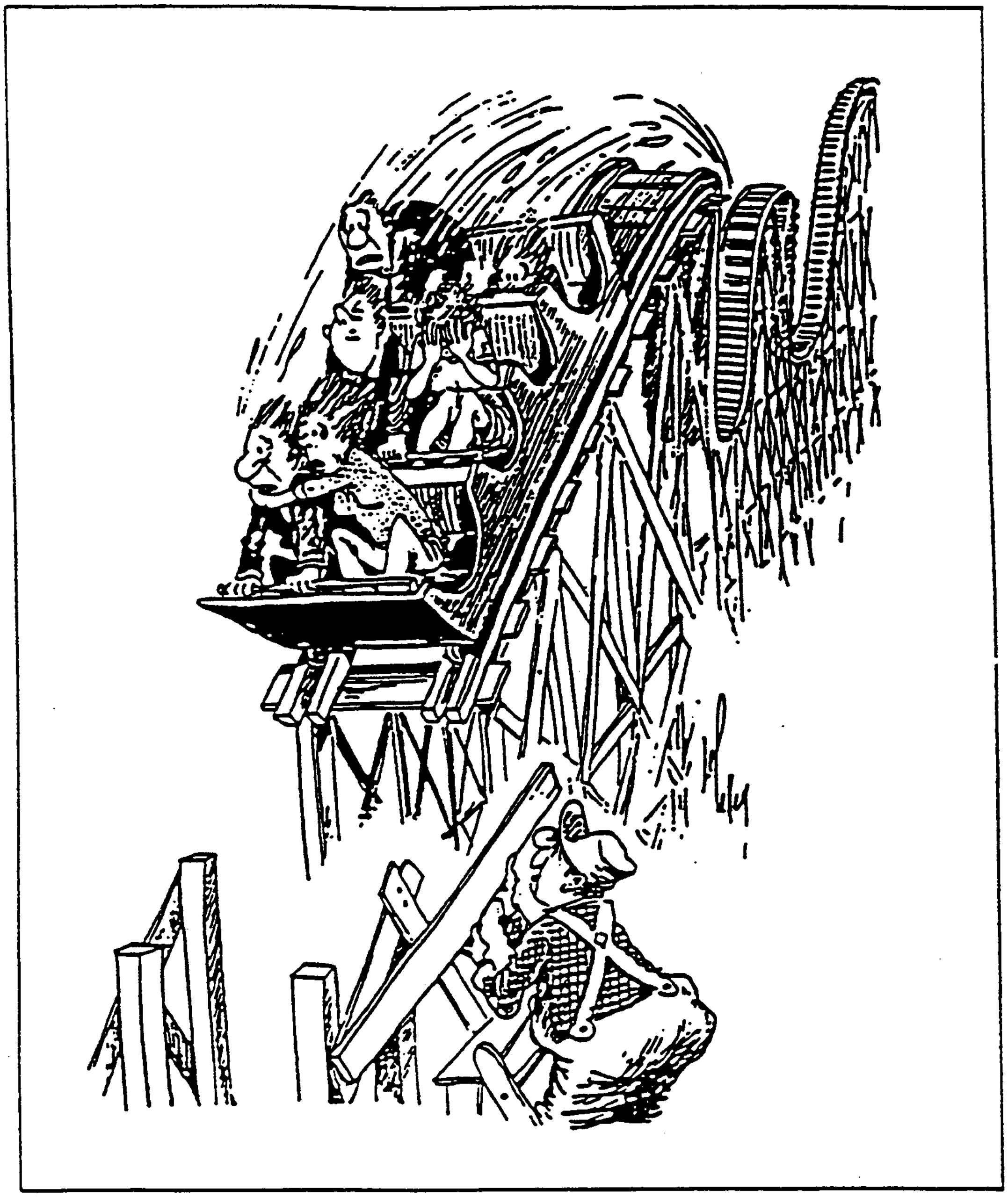


Figure 15:

Define the job in detail

Was There a Project Plan?

Figure 16:



"Good news folks! The project is 90% finished."

Persuasive Presentations: From Planning to "Post-Mortem"

Loretta F. Albert and Donna H. Cox

Abstract

The roles of technical communicators are changing and expanding. Not only must we be effective writers, editors, and designers; we are frequently called upon to present and market our ideas before they can become reality. Whether we are corporate employees, contractors, or consultants, we often find ourselves in situations where we must persuade "clients" to listen to and accept our ideas. To be successful in these new roles, we may need to develop or refresh our presentation skills. This interactive workshop offers concrete examples and incorporates the expertise from the audience to address such needs.

Workshop Outline

Setting the stage
- Opening role play by the presenters
- Role play critique by the audience

Planning a presentation
- Developing the schedule
- Analyzing the audience
- Assessing the needs
- Insuring quality

Marketing the presentation
- Packaging considerations
- Dealing with the "politics"

Making the presentation
- Developing the message
- Delivering the message
- Handling the Q and A session

Doing a "post-mortem"

Workshop Leaders

Loretta F. Albert
Eastman Kodak Company

Loretta is a former 2-term President of the Rochester Chapter and a Documentation Manager for new product development at Eastman Kodak Company. She and her team are currently developing engineering and end-user documentation for Kodak's new Photo CD Project. Her expertise includes a background in sales and marketing, as well as 11 years experience in all aspects of technical communication. Loretta presents frequently at local and international STC seminars.

Donna H. Cox
Monroe Community College

Donna is a former President and current Technical Publications Competition Manager for the Rochester Chapter. She teaches technical and professional communication for Monroe Community College. Through TWC Communications, her small business, Donna also provides training, writing, and editing for several Rochester firms. Donna presents frequently at local and international STC seminars, and at national conferences for educators. She brings over 20 years of teaching experience to the field of technical communication.

Bibliography

This section includes a draft bibliography to be handed out to participants in the workshop. The selections in the bibliography provide greater detail and more in-depth treatment of the topics we introduce during the workshop. In addition, the bibliography is organized by topic and annotated, where appropriate, to further describe the contents.

General Marketing Advice

Mackay, Harvey. *Swim with the Sharks Without Being Eaten Alive*. New York: Morrow, 1988.

This book offers useful and entertaining advice on how to "outsell, outmanage, outmotivate, and outnegotiate your competition." Contains valuable information on how to be successful in whatever you do.

Mackay, Harvey. *Beware of the Naked Man Who Offers You His Shirt*. New York: Morrow, 1990.

This book teaches you how to "do what you love, love what you do, and deliver more than you promise." Includes practical advice on all aspects of dealing with people and improving relationships with the people you encounter.

Hanrahan, Debra A., "Increasing Your Visibility: Strategies for Marketing Your Skills." *Proceedings of the 38th International Technical Communication Conference*, STC, New York, 1991.

Chin-Lee, Cynthia, Joe Schrengohst, Tim Carl, and Nancy Navarro, "How a Company Finds and Evaluates Contract Writers and Vice Versa." *Proceedings of the 38th International Technical Communication Conference*, STC, New York, 1991.

General Tips on Proposal Writing

Goodman, Michael B. *Write to the Point*. Englewood Cliffs, New Jersey: Prentice Hall, 1984.

Holtz, Herman and Terry Schmidt. *The Winning Proposal: How to Write It*. New York: McGraw-Hill, 1981.

Portèr-Roth, Bud. *Proposal Development: A Winning Approach.* Milpitas, California: Oasis Press, 1986.

Stewart, Rodney D. and Ann L. Stewart. *Proposal Preparation.* New York: Wiley-Interscience Publications, 1984.

White, Virginia. *Proposals That Succeeded.* New York: Plenum Press, 1983.

General Presentation and Visuals Tips

Rabb, Margaret Y., *The Presentation Design Book.* Chapel Hill, North Carolina: Ventana Press, 1990.

This book offers practical advice on preparing and producing presentations, such as defining your audience, planning your message, choosing presentation media, designing your presentation, how to use color and type correctly, and how to avoid "design crimes." In addition, the book contains several useful presentation scenarios.

Williams, Thomas R. "Using Visuals Effectively: Some Guidelines from Cognitive Science."*Proceedings of the 39th International Technical Communication Conference,* STC, Atlanta, 1992.

Horton, William A. *Illustrating Computer Documentation.* New York: Wiley & Sons, 1991.

Use and Explanation of Color

White, Jan V., *Color for the Electronic Age.* New York: Watson Guptill, 1990.

This book contains valuable information on the basics of color, how to use color in presentations and publications for continuity and identity, and use of color with type.

Horton, William A. *Illustrating Computer Documentation.* New York: Wiley & Sons, 1991.

Assessing Audience Needs

Constable, Susan W. "Ten Tips for Interviewing Subject Matter Experts." *Proceedings of the 37th International Technical Communication Conference,* STC, New York, 1990.

Currie, Cynthia C., "Conducting Customer Visits: How to Get Feedback from Your Readers." *Proceedings of the 38th International Technical Communication Conference,* STC, New York, 1991.

Lasecke, Joyce and Lola Fredrickson. "Needs Assessment: A First Step Toward Meeting Customer Expectations." *Proceedings of the 38th International Technical Communication Conference,* STC, New York, 1991.

Marra, Lori A. and Laurie N. Pritchard, "First Things First: Know Your Audience." *Proceedings of the 39th International Technical Communication Conference,* STC, Atlanta, 1992.

Collaboration: The Act of Swimming for Survival

by Emily Sopensky and Laurie Modrey

Abstract-*Although the American way traditionally promotes individualism and self-reliance, the technical communication process, by its very nature, demands collaboration. Moreover, current trends in company downsizing and compressed time to market require the delivery of quality products in ever-shortening cycles. Collaborative work offers opportunities for heightened creativity and enhanced quality; but it also engenders confusion and inconsistency. Using personal experience and a survey of professional communicators, we provide insight to successful collaboration, including the differences between collaboration and teamwork, the personal and professional characteristics of an effective collaborator, and techniques to improve collaborative efforts.*

Throughout major cities in Europe, gypsies work the streets for their livelihood. Even witting travelers may find themselves approached by two or more gypsies—ostensibly to peddle a newspaper or trinket—and be divested of their wallets.

Is there really something we in our universe of technical communication can learn from such motley crews? There is. It is to survive and thrive through successful, artful collaboration.

Although the American way promotes individualism and self-reliance, the technical communication process by its very nature demands that we collaborate in some manner, whether it be in the planning stage; during the revision process; or on an ad hoc, continual basis. Moreover, current trends in company downsizing and compressed time-to-market schedules require the cooperation of several interactive participants to deliver quality products in ever-shortening cycle times. At its best, collaborative work offers opportunities for heightened creativity and enhanced quality; at its worst, it engenders confusion and inconsistency.

Collaboration: Sink or Swim

When was the last time you turned to a newspaper or business magazine and did *not* see that another corporation was downsized? For example, competition has forced many personal computer manufacturers into oblivion. Those that remain, like Dell and Compaq, are tenacious in their fight for market share. New products and services are being announced at a blinding rate, forcing suppliers to think and act smartly and quickly. As one business writer put it, "...the windows of opportunity are often frustratingly brief."(1)

Collaboration is becoming the key to surviving the frenetic pace of fierce competition. The act of collaborating is also known by other names, such as "partnering" and "benchmarking." Indeed, the characteristics of collaboration are also found in the newly coined concept of the "virtual corporation."

Ultimately, the many-faceted act of collaboration is here to stay as a significant way of doing business. Collaboration develops those skills needed to keep swimming with the head above water.

Collaboration Is...

Successful corporate collaboration demands sophisticated personal and professional attitudes and skills.

Demonstration of Interpersonal Skills. Many who have collaborated successfully recognize that "[it] requires a high degree of interpersonal skills."(2) Because collaboration requires advanced personal and professional skills, it works best among seasoned professionals or at least peers who feel equally confident about their potential contributions to the project. Because conflict is inherent in the process, the collaborators must be open to facing conflict and must have experience negotiating resolution. Successful collaborators must be able to question, challenge, and adapt. They cannot be intimidated by opposition or, inversely, complacent about apparent harmony.

Like any process, collaboration has its flaws, is not for every situation, and is highly dependent on the participants in the process because roles and responsibilities are less formally defined than in more structured situations.

Cooperation With the Enemy. It is interesting that *Webster's Unabridged Dictionary* defines collaboration as 1) the act of performing work or labor together; 2) cooperation with the enemy. Collaborators do not need to be friends or even like one another to produce a quality product. However, they *do* need to cultivate and maintain mutual respect, tolerance, and trust in working together. They must believe that they need one another to get the work done. There is no room for someone so inflexible or distrustful as to demand a single solution or course of action. Collaborators acknowledge that each contributes a unique perspective, that no one individual could complete the project alone. As management theorist Karl Weick says, "Complex situations put a real premium on group processes, division of labor, trust, reaffirmation of what we respect and what we question in each other."(3)

Benchmarking is a perfect example of "cooperation with the enemy." To benchmark a product is to compare it to the competition in such detail as to require an agreement with the competitor to share certain information. Such cooperation flies in the face of the inherent fear Americans have of collusion in the business place. Our strong antitrust laws are testament to that sentiment. But it is also the American way to think and act cleverly and to adapt when necessary.

Likewise, partnering among companies has been found to create stronger links that strengthen the industry as a whole. The "...U.S. Department of Commerce's Strategic Partnership Initiative demonstrates our nation's growing awareness of the importance of partnering..."(4) For example, partnering efforts among U.S. semiconductor manufacturers and their equipment suppliers recently has contributed to a reversal in a ten-year degrading trend in world market share.

The virtual corporation is "a temporary network of independent companies—suppliers, customers, even erstwhile rivals—linked by information technology to share skills, costs, and access to one another's markets...It will have no hierarchy, no vertical integration. Instead, proponents say this new, evolving corporate model will be fluid and flexible—a group of collaborators that quickly unite to exploit a specific opportunity. Once the opportunity is met, the venture will, more often than not, disband."(5)

In short, industry and government are now understanding the value of leveraging external resources to meet customers' and constituents' demands and to meet reduced budgets.

Product-Driven. Collaboration is not driven by the process or the participants' relationship. Instead, the focus is on the product being developed by the participants within the given deadline.

Buy-In. All pariticipants must recognize their role in the process and be willing to participate despite inevitable conflicts. They must be willing to take risks, do things differently, handle exceptions, motivate themselves and others, and productively deal with whatever surfaces.

Communication. Collaboration, dependent on problem-solving and creative solutions, relies heavily on constant communication. The flow of communication is determined by the collaborators and not by an external authority. Collaborators must proactively use whatever resources are available to communicate. Assignments are not handed to them; instead, any member can initiate a communication when a gap in the flow is perceived.

Resourcefulness. Successful collaboration is often characterized by the spontaneous, creative nature of the group's problem-solving techniques. Because the structure of the collaborative group is less formal and rigid, problem-solving cannot rely on the formal organization to arbitrate or make things happen. Further, the veteran collaborator knows the value of establishing rapport with support staff and knows not to abuse it by making demands, such as unrealistic turnaround times. Planning ahead to avoid logjams is also part of being resourceful. **Adaptive, flexible, resilient,** and **cooperative** are additional adjectives that describe the necessary ingredients of successful collaborations.

Interactive Process. Collaboration, like documentation in general, requires an interactive process among its participants.

Shared Knowledge. Collaboration works more swiftly and smoothly when the participants have knowledge of and experience with the entire process. This may inlcude project management and scheduling, time management, the publication process (including print operations), and the review process.

Risky. For several reasons, collaboration can be risky. Because strong interpersonal skills are required to make collaboration work and because there is less formal organization to rely on settling issues, stressful situations are more likely to arise. Further, the lack of standard operating procedures automatically creates potential barriers to understanding. Because they are out of the mainstream, collaborative efforts rarely receive reward and recognition. Collaborative efforts may or may not be a boon to the participant's career. Collaboration can enrich skills but individual contributions probably will not be apparent. Moreover, successful collaborators share the victories and defeats of collaboration. Individual heroics do not make a collaborative effort successful.

Collaboration Is Not...

Collaboration is to be differentiated from the more conventional way of working collectively—teamwork.

Returning to the dictionary, the definition for ***team*** is 1) a brood of young animals, especially of ducks or pigs; 2) two or more horses, oxen, etc. harnessed to the same vehicle or plow; 3) (a) two or more draft animals and their vehicle, (b) one draft animal and its vehicle; 4) a group of people working or playing together; 5) any number of animals or birds passing in a line; a flock, as of wild ducks, flying in a line. Note the relatively behavioral nature implied in the definition of team. Human interaction is a distinct fourth in order of importance. The definition for ***teamwork*** is a little bit mollifying: *Webster's Unabridged Dictionary* defines teamwork as 1) joint action by a group of people, in which each person subordinates his individual interests and opinions to the unity and efficiency of the group; coordinated effort, as of an athletic team; 2) work done by or with a team.

Further distinctions between teamwork and collaboration are as follows:

Collaboration	Teamwork
Because projects requiring collaboration are product-driven, the same people may or may not collaborate on another project.	Teamwork usually has the same group of people who are used to working together on various projects.
Collaboration works best among individuals who are experts in their fields. Membership in the collaborative effort depends on the various disciplines needed to be represented in the finished product.	Membership in a team is pre-determined by job assignment.
Collaboration can occur anywhere as long as various modes of communication are available to all participants, such as E-mail, telephones, faxes, networked systems, and so on. Collaborators do not have to be physically accessible to one another.	Teamwork is usually place-sensitive. Teams work together in the same physical space and depend on meetings for exchanging information.
Collaborators are generally peers who have a coordinator. A hierarchy among collaborators may exist, but it is not the driving force. Collaboration is a temporary alliance.	Generally, teamwork requires a leader who also is *given* some organizational authority over the team, say in granting leave, assigning tasks, and evaluating the employee. The project manager or leader assigns individuals their tasks and guides the overall effort. The team member responds according to his or her assignment. The organizational hierarchy is usually apparent.

Table 1. Teamwork vs. Collaboration

What Worked...

Last year, one of us was asked to come into a large multinational corporation to help with 10 different technical papers for two conferences having entirely different focuses. The papers were drafted by various company experts physically located in Texas, Iowa, and Canada. These authors were accessible by telephone, fax, and overnight delivery. But two were not easily accessed on the network. All illustrations had to be reworked or drawn from scratch. None of the authors had met or even heard of the freelance technical communicator before the collaboration. Helping these experts finalize their papers, meet the proceedings deadlines, overcome logistics and hardware problems, and develop presentations for each author required a collaborative effort, not only with the authors but also with the support staff in Austin (TX) and at the other sites.

The camera-ready copy was mailed in time, the authors were ready to deliver their papers without critically affecting their workloads, and the company had a concerted, uniform presence in the proceedings from both conferences, implying the company was a cohesive entity (which it is). In addition, the company, which viewed the technical papers as one more vehicle for marketing its complex products, provided papers of a highly complex and sophisticated nature that added substance to its marketing efforts and the authors were well prepared to deliver their papers at the conferences.

None of this could have occurred if the collaborators had not been both willing to participate in the process but also sage enough to understand the dual nature of the papers—to inform and to market.

What Didn't

A temporary group was formed of writers, editors, a desktop publishing expert, and engineers across the organization. It was unclear who was coordinating the group so another senior engineer was appointed to head the project. The editor, unsuccessful in gaining control, ceased to participate altogether. A novice writer never established rapport with one of the engineers with whom he was assigned to work. The remaining communication members ended up shouldering most of the responsibility for delivering the product.

Recognizing that the quality of the resulting product suffered, the group members cited the lack of clear goals, roles, tasks, and leadership as the main reasons. Communication—or rather, the lack of it—was a major issue. The publications members expected the lead engineer to pass information to the group. However, he passed only the information he thought was important to the editor, whose participation was already sporadic.

The engineers, not understanding the production process, regularly violated schedules. Further, they were unwilling participants in the group because their roles were dictated by the executive office. In turn, they delegated their tasks to others not involved in the project who put it at a lower priority. Because several engineers lacked respect for the roles of the publications people, they were slow to respond to publication requests.

While the product went out on time, group dynamics disintegerated to such a point that some members refused to interact with others after the project.

To Collaborate...Or Not

The following chart shows elements of product development along with two columns that describe the status of the organization developing the product. Use this chart in helping you determine whether collaboration could work in your situation. However, do not use it soley in making your decision

Product Development Elements	Conducive to Collaboration	Appropriate for Traditional Methods
Product	High visibility	Few users
Type of user	External use	Internal use
Type of project	Marketing tool	Limited distribution
	Special project	Subject to routine revisions/updates
Time frame	Quick turnaround needed	Regularly scheduled
Contents	Can be completed only by crossing organizational boundaries	
Prod. team	Staff resources unbudgeted; Pubs staff affected by downsizing	Staff resources identified and budgeted
Skill level	Specialists required	Generalists required
	High level of expertise required	Specialized data already established
	Experts are dispersed across traditional organizational and physical boundaries	Experts available within the immediate organization
Leadership title	Coordinator	Supervisor, Team Leader, Project Manager
Organizational Boundaries	No restrictive boudnaries	Traditional hierarchical organization imposed
	Few, if any, standard operating procedures	Standard policies and procedures apply
	Out of the formal reward and recognition loop	
Decision-making	Consensus not required	Consensus often required
Types	Proposals Strategic plans Annual reports Journal and trade magazine articles In-house newsletters Textbooks Some training manuals (cross ingdepartment lines) Some policies and procedures (e.g. safety affects everyone)	Updates Revisions Newsletters

Table 2. Collaboration Checklist

But let's return to the gypsies. Their strength derives from their cleverness, creativity, commitment to the clan, and cultural milieu. They work in partnerships, driven toward a shared goal instead of self-satisfaction. Their social environment supports them, allowing them to bring to their work the collective wisdom of the past. And in the face of adversity, they adapt and press on.

Likewise, collaboration can be a means to a favorable end if the nature of its collective force is understood.

References

(1) Byrne, John A. "The Virtual Corporation," Business Week, February 8, 1993 McGraw-Hill Inc., New York, NY, pp 99-103.

(2) d'Hont, Susan Danielle, TIRIS European Marketing Services Manager, Texas Instruments in a conversation with Emily Sopensky, Febraury 13, 1993.

(3) Weick, Karl, as quoted in *Technical Communication*, "Models for Technical Communicators," Gene McGuire, 3rd Quarter, 1992, pp 467-468.

(4) SEMATECH Long-Range Strategic Plan 1994, p. 167, SEMATECH, 1992.

(5) *Op. cit.*, Byrne, p. 99.

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"IT'S THE INDEX, STUPID!"

Patricia A. Johns, Indexing Information Systems

I am a self-confessed member of the "RYDM'' club. We are an informal group of the best sort: we own some of the most sophisticated, and *expensive* pieces of equipment TN the world. We don't demand dues from our members, or formal meetings. No bylaws to read either. We gather informally around water fountains, coffee pots, telephones--and complain--a lot. We're good at that. There are millions of us, and I'll bet you're one of us, whether you confess to it or not.

We are the hapless, helpless, and very frustrated majority of people who own the ultimate in hospital testing equipment, software, printers, cars, dishwashers, microwave ovens, etc., and can't make 'em work! At best, we are aware of the wondrous capabilities of these twenty-first century marvels, but that is all.

I know, for example, that this powerful program (which shall remain nameless) on which I am composing this Jeremiad, is capable of publishing an entire book. I know that that is so because the sales promotion literature said so, but I am totally incapable of accomplishing this task by myself. "Read Your D'd Manual!" the angry, inconvenient West Coast long-distance support line snapped at me. Now there's a plan. He's paid to sit around all day and read that thing.

Now that we have stated the problem, let us explore the simple solution. To paraphrase our latest political experiment, **"It's the Index, Stupid!"** Frequently, it's not worth the paper it is printed on. The computer nerds know exactly how to do it, but as for the rest of us-- the vast majority of the people who have paid for these programs, heaven help us. We don't all speak the Queen's English.

So, what's an index? An index comes in all shapes, sizes, and forms. Suffice it to say here that it has one purpose: *To provide access to information* Textbook, legal, and medical publishers have known this for years, as well as a handful of governmental agencies, and librarians galore. It is not a table of contents, nor does it tell you how to do anything, it simply gets you to the information you need to accomplish your task. *Quickly and easily.* It contains synonymous terms, opposites, and parallel concepts. It is specific. To illustrate the decentralized, point-specific theory of indexing, I will use a good example and a bad example. For fun, let's start with the typical mess.

It is very snowy, 17 degrees Fahrenheit, mid-February . It is 11:30 at night, and you are returning from a meeting in a local suburb. There are some very lonely, dark stretches of road between you and home-sweet home. You're driving your relatively new 4x4 truck, and it picks tonight to treat you to a flat tire. You pull over to the side, and with your emergency flashlight you cleverly keep in that small cavity appropriately called a "glove box", you determine that your left back tire is kaput. Flat as a pancake, done for. What to do?

You clamber back into the warmth and safety of your truck. You decide to save your flashlight for the nasty business outside, and flip on the dim reading light in your vehicle. The "RYDM Hour" has painfully arrived, and you reach for that **OWNER'S** MANUAL(S) you promised yourself you would read, some day soon. Three different owner's manuals fall out of their plastic folder onto the floor. Aha! Here's the big one, entitled OWNER'S MANUAL. This, you think, will tell you how to change the tire. There's also another smaller booklet, YOUR TIRES. Never mind the one with the 9 point type, LIMITED WARRANTY, that's not going to help.

Let's see now. Let's try the smaller of the two manuals, entitled YOUR TIRES. It might have some quick emergency information about how to change a tire. You look for an index, and find the back of this booklet bare. No Table of Contents, either. Just unnumbered pages of "stuff" that opens slinky-style onto your lap, spilling its 13 folded pages of information across the center console. All you find here is a conglomeration of facts about tire pressure, rotation, and something called "The Hideaway Spare Tire". Hey, that's right: this is a pickup truck with an extended cab. Where is the spare tire? And where's the jack? But the lengthy discussion in this hide-away section deals with the spare tire for a car. This is not something in which you, or any owner of this particular vehicle, is even remotely interested. OK, well at least you have eliminated this booklet as a source of help.

Here comes a car whose headlights illuminate this long tunnel of paved darkness among the trees. With worried excitement, you wonder will he stop? Do you want him to? He whizzes by, totally unconcerned with your predicament. You're not sure whether to breathe a sigh of relief or not.

So let's try the index in the big OWNER'S MANUAL. You, optimist that you are, look under the well known entry "Flat tires". No such animal. OK, articulate person that you are, you look under "Tires". There you find no entry for "Flat tire" but you do find a group of 15 sub entries under the term "Tires", 3 of which may get you to it.

Tires
- Damaged..........3-14
- Replacement..........5-21
- Spare..........3-9, 3-12, 3-13

You proceed to page 3-9, to find a discussion, "Spare Tire Storage". It tells you that the spare tire is located under the vehicle. (And in your new Brooks Brothers suit, you'll be crawling under there in high style.) The manual admonishes you to secure the vehicle fast with the jack while you retrieve your spare tire. The jack, this page continues, is behind the passenger seats in the extended cab section of the truck. "Refer to Jacking instructions", it continues. You go back to the index to find the entry

Jacking.........3-5

This entry is not repeated in the subgroup under the heading "Tires", along with the 15 other sub entries, as it should be. (You do, after all, have to have the truck jacked up to even get to your spare. No one thought of that.)

Now, I still have to get my jack. On page 3-5, the manual tells me how to jack the truck up, not how to pull the seats out to get to the jack. There is only one entry for the term, "Jack". Nothing under the jacking description to tell you the location of the jack; remember that bit of necessary "first" information appears on page 3-9. So, you have discerned the pattern of instruction here: when you figure out how to get the jack out, all you have to do is follow the instructions on a page-by-page basis from 3-5 through pages 3-13.

But I necessarily digress: back to the jack. You look up the index entry:

Seats..........1-7

There you find a 2 page description of "Seat Controls for Bench or Bucket Seats", a half page dealing with "Rear Folding Seats" on a model different from yours, and, at last, at the bottom of page 1-9 "Jump Seat--Extended cab models only". Success.

As the sun rises in the East, your Gucci's now suitable (pardon the pun) only for Mona the Mastiff to munch, the local police, Officer Friendly, stops by to offer you a tow from his brother-in-law and a parking ticket returnable in town court Monday night.

TO INDEX OR NOT: THAT IS THE QUESTION

Because of the quantity and diversity of information in our fat OWNER'S MANUAL, do not rely on the Table of Contents to help your user. A good index is always specific, a Table of Contents necessarily gives a broad, over-all view. If the book is well written, the glossary will provide a skeleton for the structure of your index, but nothing more. This particular manual is not well written, so enough said about this particular case. If the authors or editors have not done their job well, the index can sometimes still get the reader where he wants to go.

In the case of our smaller, multiple fold manual, YOUR TIRES, it's not really necessary to have an index. The manual really only talks briefly about 3-4 simple matters. Label the contents clearly on the outside page, or insert a quick key word Glossary in the front. If it's not possible to wrap everything up in one book, at least it saves us some time.

WHO'S GOING TO USE THIS MANUAL?

Always keep the user in mind when indexing: For whom is this manual intended? Engineers? Ordinary consumers? Mechanics? Use the language or jargon that is most familiar to your audience. If intended for all three, use the language of all three, with liberal use of cross-references, or, if space allows, repeat the entries under the individual's native tongue. In the case of a "flat", I would create a heading thus:

Flat tires

Generally.........3-5 to 3-13

Jack

Location..........3-9

Use 3-5

Seats

Bench or bucket seats..........1-7

Rear folding..........1-8

Jump seats..........1-9

Spare tire

Location.....4-9

Pressure in..........2-12

SAVE SPACE, SAVE MONEY, AND GET A RAISE

It's a wonderful service to the user of any index to be very specific, but it isn't always economical. We can compress the above example into 4 lines, if we must. Try to avoid huge strings of numbered references. For example, it's no service to cram all the above cites into one line for "flat tires". Always please the boss, but make the index worth the space it occupies on the page.

CROSS-REFERENCES

A cross-reference refers the reader to synonymous or opposite terms, and related information. There are always at least two separate entries, or the single entry is repeated under the specific heading. For instance, as anyone knows who has ever had to change a tire, the lug nuts are almost impossible to loosen. This manual is silent on the term "lug nuts", and calls them instead "wheel nuts". There should be a cross reference reflecting this:

Lug nuts. See subheading: Wheel nuts

Wheel nuts

Loosening..........3-10

Torques..........3-13; 6-4

If there were only one entry pertaining to the loosening of the wheel nuts, the point would be repeated in two places:

Lug nuts, loosening of.........3-10

Wheel nuts, loosening of..........3-10

Thus, no matter what term your reader uses, he will find his specific point. Above all, always check your cross-references, to make sure you have not created a blind circular cross-reference:

Lug nuts. See heading: Wheel nuts
Wheel nuts. See subheading: Lug nuts

Cross-references can be a pain in the neck to the user, who occasionally grumbles he has to look twice to find something. But in the interest of conserving space--and money--look at it this way: At least we got the reader to the all the information he needs.

KEY WORD INDEXING

Always select the strongest, most descriptive term. If the term "Wheel nut" is the industry standard or the author's preference, use it--with the appropriate cross-reference.

Do not start your index entries with weak words, such as verbs. In our example, all sorts of car parts loosen; say what is loose. Or, to further illustrate:

Steering wheel, collapse of........2-8
not
Collapse of steering wheel........2-8

DON'T MIX OIL AND WATER

Avoid Hierarchical indexes. For example, there are all kinds of fluids in the car: brake fluid, automatic transmission fluid, window washer solution, water, oil and so on. Avoid major; general headings like "Fluids"; you will then have to create subgroups, and sub-subgroups under this non descriptive heading. You will reap confusion pollution. Create major headings out of the specifics. Under the specific name of, say,
automatic transmission fluid, collect every point pertaining to it, thus:

Automatic transmission fluid
Checking..........1-9
Filling..........1-12
Viscosity..........1.10

Remember, too, the specific terms and ideas inherent in the above example. E.g. "Transmissions", "Manual transmission" , etc. and follow the above guidelines.

READ IT BACKWARDS TO MAKE SENSE!

In the above example, we can see clearly that the above subgroup refers to the automatic transmission fluid. No extra articles or prepositions are needed here, such as "Filling the" or "Checking of". It adds nothing but clutter. Keep index entries clean and concise. If we were to continue and execute a more detailed index as follows:

Automatic Transmission Fluid
Checking..........1-9
Filling..........1-12
Levels.........1-15
Drain intervals.........1-19

Viscosity..........1-10

We have created a sub-subgroup under the term Filling; these two lines are exclusive to the act of filling the transmission fluid, not checking it. They represent specific additional points the reader might have missed if he failed to "RYDM".

ANY TOOLS TO RELIEVE THE TEDIUM OF THE TRADE?

Many professional Indexers are still out there working with the "shoe box" method of indexing--lots of little pieces of paper, and doing so successfully on small indexes. One of the best Indexers I know uses WordPerfect. There are a host of other programs that will generate what we call "imbedded" indexes, but they present a whole host of problems as well. There are also powerful computer programs dedicated just to the professional Indexer that take the "grunt work" out of the writing of an index, but there are no good computer generated indexes. Until AI (artificial intelligence) arrives, don't count on our electronic brains to do the reasoning, thinking job of the human mind. There's no lazy way out of this one.

Authors have been known to be good Indexers, but their indexing usually falls just short of nightmarish confusion. The author knows what he means, and indexes it his way, usually repeating most of the book in the process. The professional Indexer is not, on the other hand, a nuclear physicist. He may very well specialize in scientific indexing, but he need not be an expert to "point the way". As a matter of fact, it's far better that he is a professional Indexer; he knows how to handle large quantities of information quickly and far more efficiently than other professionals. We are expert in our area, too, and we presume nuclear physicists have other things to do with their time.

Expand your horizons and do some of your own indexing. Some of you may even get so you like it and become quite good at it. I suggest that you start out with small quantities of material. For large or multi-volume projects which frequently require thesauruses, however, or if you simply hate the thought of doing an index, hire the professional.

A technical manual may not be counted a success, no matter how well it is written, if the user can't find what he needs to know NOW. Please, spare us all those back country roads at midnight.