

# AT&T DOCUMENTATION: THE USER VIEWPOINT

Martha T. Crenshaw

*Martha T. Crenshaw is supervisor of the Technical, Electronic, and Structured Documentation Department at AT&T Network Systems in Winston-Salem, North Carolina. She develops personal-computer-based presentations of text, graphics, and animation. She also develops electronic UNIX® system databases for the AT&T information delivery system. She received a B.S. in business administration from the University of North Carolina, Chapel Hill, and an M.B.A. from Vanderbilt University. She joined AT&T in 1980.*

Documentation of some type is very important— or absolutely essential—to nearly everyone. In this survey, AT&T documentation was viewed positively, but the consensus view was that competing companies were doing somewhat better. Other topics in this paper include user perceptions on documentation importance and use, problems caused by lack of documentation, delivery methods preferred, and user comments and suggestions.

## Introduction

A corporate task force on documentation was chartered by Robert E. Allen, AT&T president and chief operating officer, to determine if AT&T's documentation process and related organization and management systems are operationally effective and efficient. Specifically, the study objective was to review the origination and publication of all types of documentation throughout AT&T and make recommendations, if any, to improve effectiveness and efficiency.

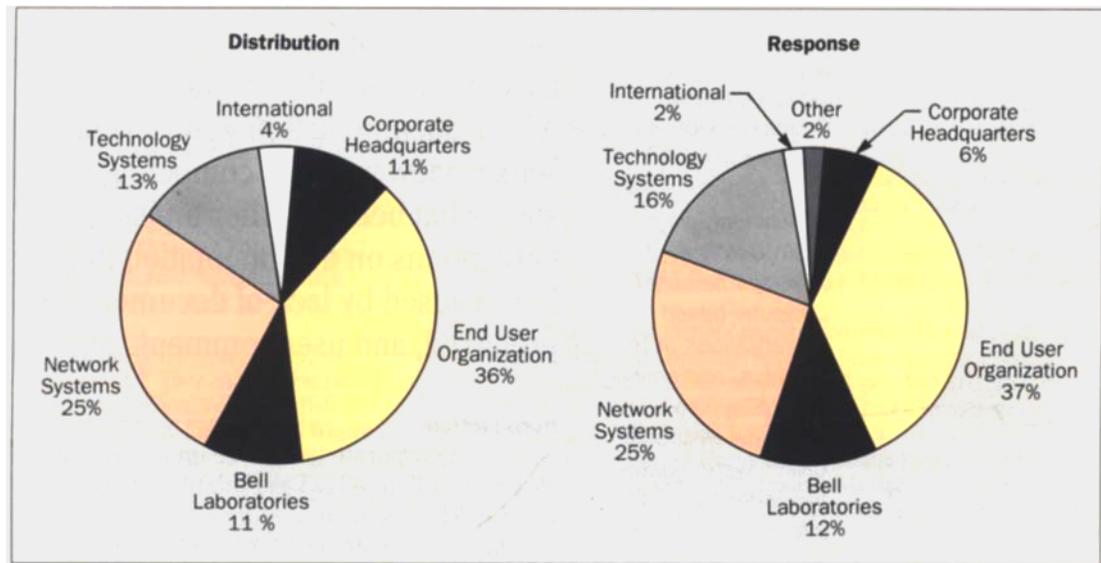
The first phase of the study was to develop a benchmark to serve as a point of reference for all decisions and recommendations affecting AT&T documentation. The information gathering and analysis phase looked at the following:

- What competing companies do
- What the experts think about documentation management and development/production
- What users think about AT&T documentation
- The current documentation system in AT&T

This paper addresses the “user viewpoint” compiled from a questionnaire commissioned by the corporate task force and from the experience of members of the study team. Respondents to the questionnaire were AT&T employees. They represent a combination of actual “end users” of documentation (those who use the information to perform their jobs) and “intermediate users” (those who use the documentation, but in a less direct manner—i.e., as reference to develop a sales plan or to answer a customer question).

91

**Figure 1. Distribution of mailed questionnaires among AT&T business units and distribution of responses.**



### Study Team Questionnaire Results

The AT&T Documentation Study Team developed and administered a direct mail questionnaire to collect the impressions and opinions of users of documentation and those involved in its management or production. For the purpose of this study, documentation was defined as any information either supporting or forming an integral part of any AT&T product or service, including, but not limited to, literature, installation and maintenance handbooks, data sheets, product selection guides, customer or sales training packages, reference manuals, software documentation, drawings, catalogs, and customer user guides.

The results of this questionnaire are reported for the total respondent sample with special note given for those respondent subgroups with significant differences.

### Methodology and Respondents

The eight-page questionnaire was constructed to collect information from two specific groups:

documentation users and documentation producers/managers. Section I of the survey involved common demographic questions, Section II was directed to documentation users, and Section III was directed to those who both use documentation and are involved in its production or management. Questionnaire development, revision, and finalization were performed by members of the Documentation Study Team.

Each study team member provided names for the survey sample. All questionnaire respondents were AT&T employees. Team members gave broad coverage, geographically and across AT&T entities. The final sample included a cross section of documentation users and targeted a number of individuals involved in the documentation process (planning, management, coordination, development, production, distribution, quality control, etc.).

Completed questionnaires from 415 respondents were received, for an overall response rate of 25 percent. Individual business unit response was fairly representative of the questionnaire distribution (Figure 1).

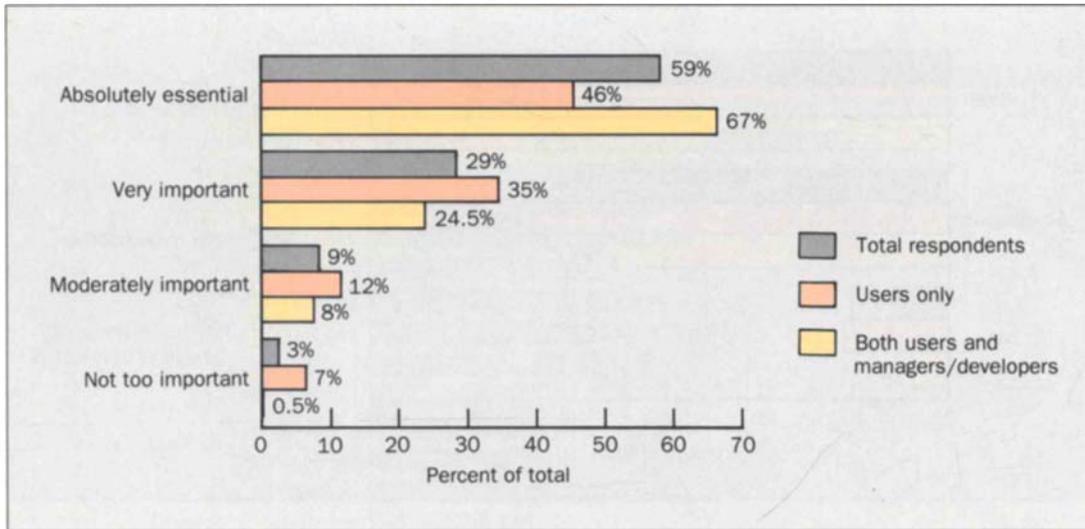


Figure 2. Importance attached to documentation by respondents.

### User Perceptions of Documentation

The questionnaire elicited responses about user perceptions on aspects of documentation ranging from importance to quality.

**Documentation Importance.** Documentation is considered *very important* or *absolutely essential* by nearly 90 percent of those who responded to this questionnaire. Only 3 percent answered that documentation is *not too important*. The respondents from Network Systems and Federal Systems tended to answer that documentation is most important, and the respondents from the Contract Services Organization, AT&T International, and Corporate Headquarters were slightly more apt to say that documentation is not as important. The overall results, which project overwhelming significance to documentation, must be weighed against two possible biases: (1) people who feel documentation is not important are less likely to respond to a questionnaire on documentation and (2) over half our respondents are involved with documentation not only as users, but also as managers, developers, or producers, and thus have a vested interest

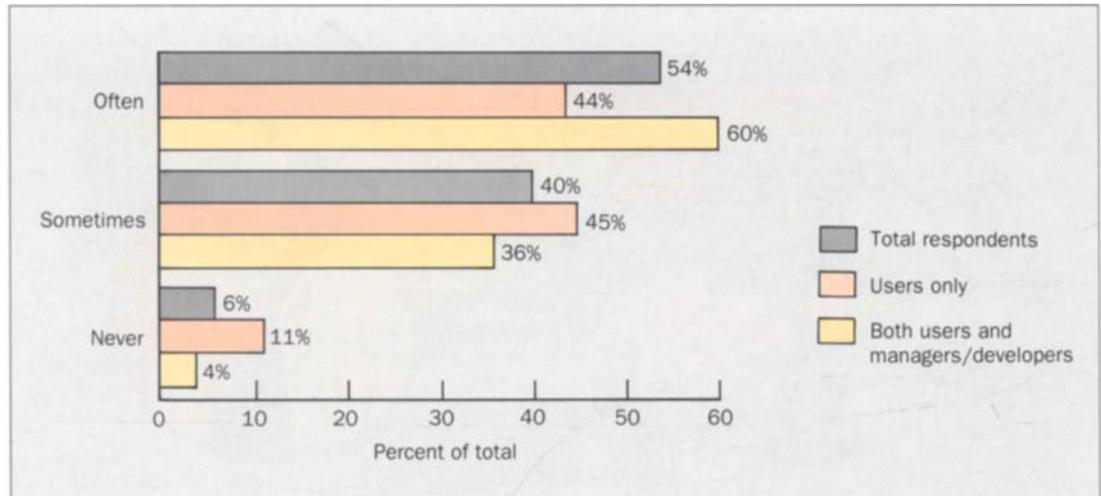
in the importance assigned to documentation.

Although we cannot predict the opinions of non-respondents, we can highlight the differences one would expect from the second bias. As Figure 2 indicates, documentation managers, developers, and producers assign a greater importance to documentation than end users, but both groups agree that documentation is important. This reflects a growing industrywide recognition of the role documentation can play in marketing/sales and product differentiation, especially in the software market.

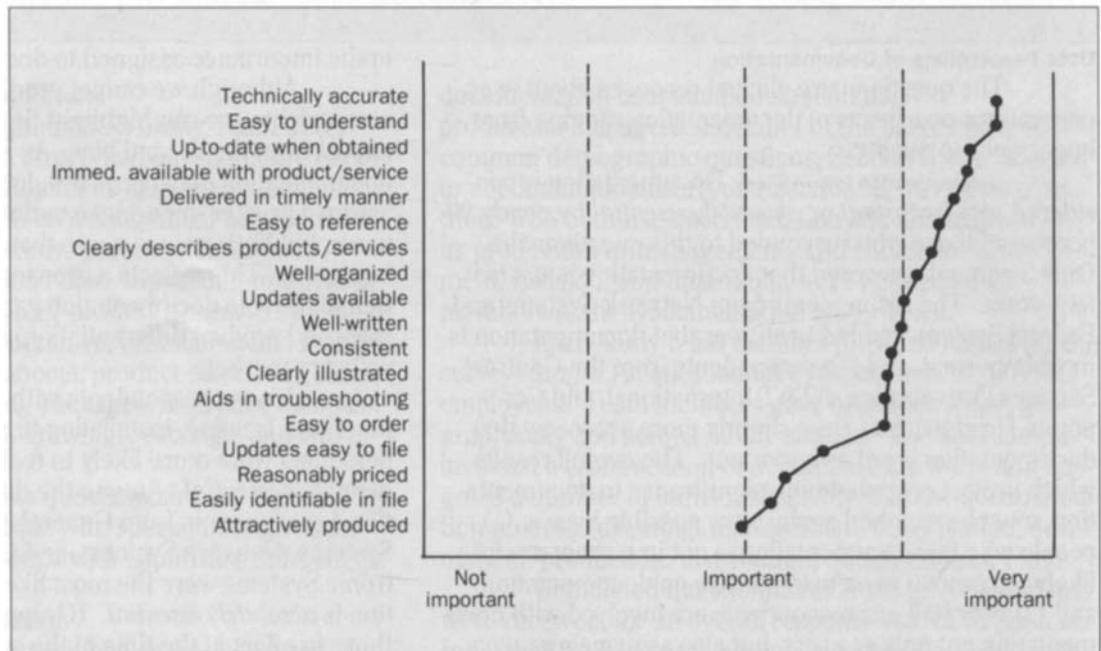
Among respondents with different primary job functions, training, installation/maintenance, and sales personnel were more likely to feel that documentation is *absolutely essential*. Among the different AT&T organizations, respondents from General Markets Group, Federal Systems, Network Systems, and Components and Electronic Systems were the most likely to say documentation is *absolutely essential*. (Organization names are those in effect at the time of the survey.)

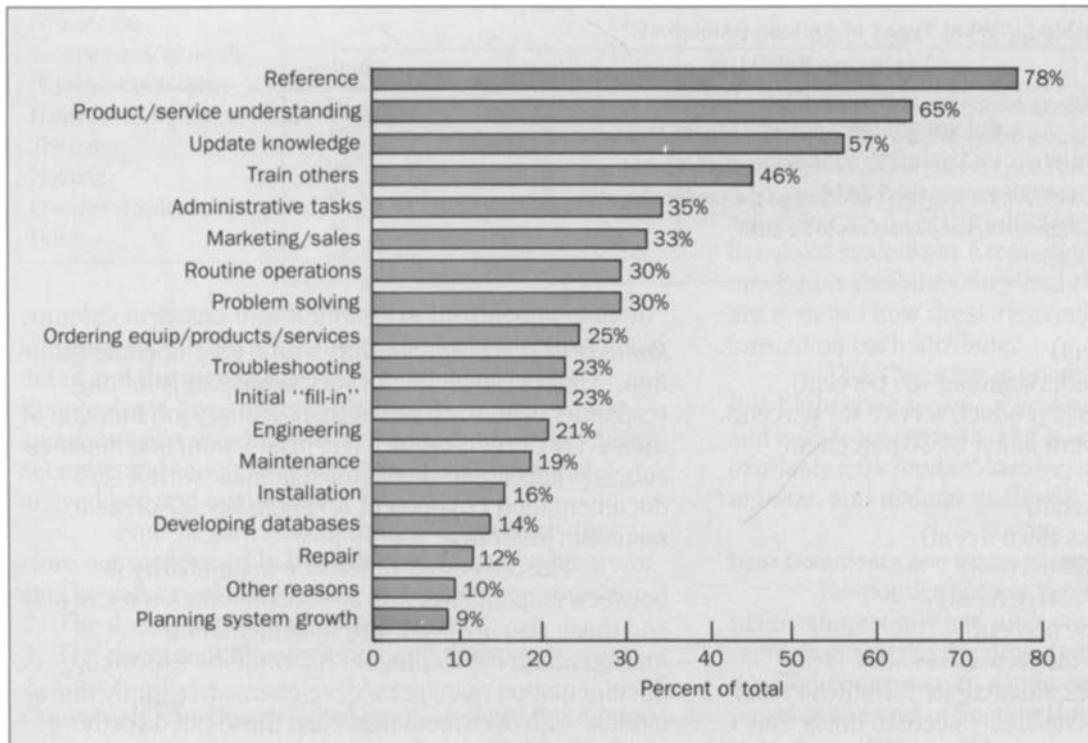
As documentation plays an increasing role in the

**Figure 3. Frequency of documentation's influence on product/service perceptions.**



**Figure 4. Importance of documentation attributes.**





**Figure 5. Reasons documentation is used.**

95

marketing of our products, most customers, like internal AT&T documentation users, let the quality of the documentation influence their opinion of the actual product or service. This relationship contributes to the importance we place on product support documentation. In this survey, only 6 percent of the respondents said the quality of the documentation *never* influences what they think about AT&T products/services, compared with over half who said documentation *often* influences what they think about AT&T products/services (Figure 3).

To understand which attributes of product/service documentation are most important, the questionnaire asked respondents to rate the importance of 18 specific documentation attributes on a five-point scale

from *very important* (1) to *not important* (5).

Figure 4 plots the means of the importance ratings for each attribute (listed in descending order of importance). The mean of every attribute was at or above the *important* rating, with *technical accuracy* and *easy to understand* being the most important.

**Documentation Use.** The questionnaire listed 17 possible uses of documentation (plus an open-ended *other* category) and asked respondents to check the main reasons they used documentation in their jobs. Figure 5 shows the percentage of respondents who responded positively to each reason.

Three reasons for using documentation were checked by over half of the respondents:

Table I. "What Types of Serious Problems?"

Problem	Citations
Affects marketing, sales, customer relations	92
Causes delays, wastes time, takes longer to find information	57
Can't use, operate, install, or repair product/service	40
Causes confusion, don't understand the product/service	29
Causes errors and mistakes to be made	16
Other	39

- As reference (78 percent)
- For product/service understanding (65 percent)
- To update knowledge of a product/service (57 percent).

Five additional reasons were noted by 30 percent or more of the respondents:

- To train others (46 percent)
- For administrative tasks (35 percent)
- For marketing/sales (33 percent)
- For routine operations (30 percent)
- For problem-solving (30 percent).

**Problems Caused by Lack of Documentation.** The importance assigned to documentation attributes associated with timeliness and availability seem to imply that lack of documentation causes problems. When asked directly "How often does lack of AT&T documentation cause serious problems?" nearly 90 percent of the respondents answered *often* or *sometimes*.

Two-thirds of all respondents took time to write an answer to our open-ended question: "What types of serious problems, if any, does it cause?" The verbatim responses can be categorized into five broad types of answers as indicated in Table I.

**Documentation Delivery Method.** Documentation users overwhelmingly prefer paper documentation to other delivery methods (86 percent of total respondents). On-line documentation was second, being the preferred delivery method for 11 percent of the total respondent base, although only 6 percent is delivered on-line.

**Familiarity with AT&T Documentation.** Over 90 percent of those who responded to the questionnaire are *very*

*familiar* or *somewhat familiar* with AT&T documentation. These results did not vary significantly among respondents on the basis of their primary job function or their AT&T organization. The installation/maintenance subclass appears to be the most familiar with AT&T documentation (73 percent *very familiar*, 27 percent *somewhat familiar*).

The only other difference in familiarity is between respondents who are documentation users only and those also involved with documentation management/development. As would be expected, documentation managers/developers are slightly more familiar with documentation than those not directly involved with its creation.

After being asked what documentation they were most familiar with, respondents were asked "What do you like *most* about this documentation?" Even though each answer was unique, the responses can be categorized as in Table II. Responses categorized as *content* included such answers as "good informative content," "technical content," "very important information about AT&T," and "instructions on 'how-to.'" The exact responses for the other categories are fairly identical to the category title.

Only slightly fewer respondents (69 percent vs. 73 percent) responded to the question "What do you like *least* about this documentation?" Their answers, summarized in Table III, often centered around the same attributes they noted in the previous question. For example, 36 respondents noted that they liked the

**Table II. "What Do You Like Most?"**

Attribute	Citations
Content	46
Easy to use, easy access, easy to follow, etc.	46
Completeness, thoroughness, level of detail	36
It's available	33
Clarity, well written, gets to the point	27
Well organized	20
Format, size	18
Accurate and/or timely	15
Physical appearance—"it looks good"	13
Helps me do my job, necessary for my job	11
The index	7
Nothing	5
Provides standard information	4
Other	20

completeness and thoroughness of the documentation, and another 40 said what they liked least was the lack of detail and the incompleteness of the documents. Respondents liked documents that were "easy to use," and didn't like those that were "hard to use"; they liked accurate and timely documents and not those that arrived late and out of date.

Four factors among things "liked least" that were not mentioned in the "like most" responses were:

1. The volume of information and paper we produce
2. The documentation update process
3. The documentation ordering and delivery process
4. Cost.

Conversely, the things "liked most" and not mentioned

in the "liked least" responses were:

1. Well organized
2. Appearance
3. Necessary for my job
4. Provides standard information.

**AT&T Performance Ratings.** Respondents were asked to rate AT&T product/service documentation on a five-point scale from *Excellent* to *Poor* on the 18 documentation attributes they had rated in importance. Figure 6 shows how these respondents felt AT&T performed on each attribute.

AT&T's rating is good on most of the attributes. It is highest on *technical accuracy*, *attractively produced*, and *easy to understand*, and it is lowest on *immediately available with product/service*, *delivered in a timely manner*, and *updates available*.

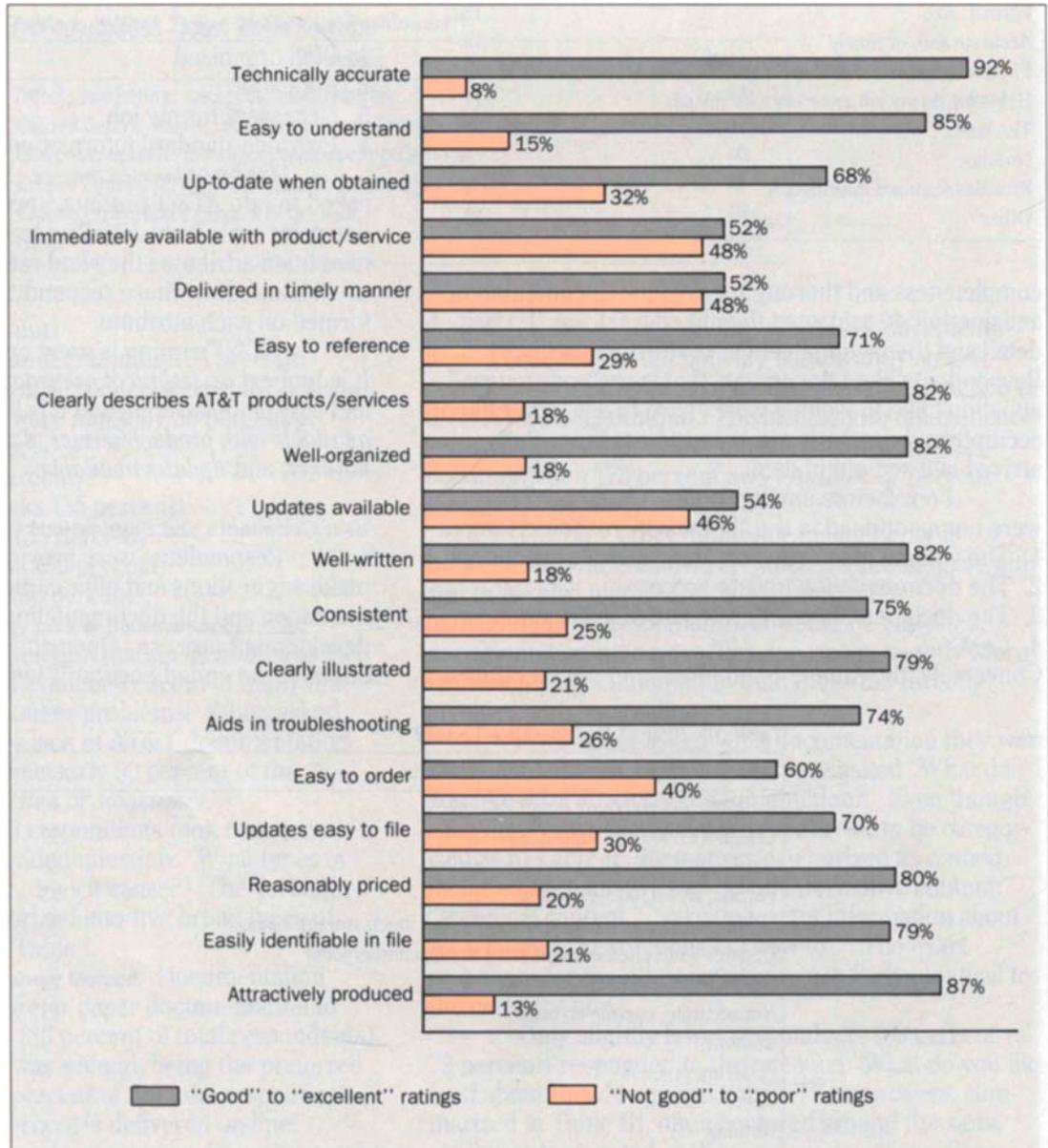
#### User Comments and Suggestions

Respondents were provided two opportunities to make suggestions and offer comments on AT&T documentation and the documentation management/development process. Open-ended questions were posed at the end of Section II for respondents who had

**Table III. "What Do You Like Least?"**

Attribute	Citations
Incomplete, need more detail, examples	40
Late, not up to date, timeliness	39
Hard to use, difficult to find information	36
Format, layout, size, no index	33
Volume—too much paper, too bulky, too much storage space	30
Updates—not often enough, hard to file, cumbersome	27
Not well written, unclear, wordy	23
Not accurate, contain errors	13
Content	9
Ordering process	8
Cost	7
Nothing	5
Other	17

**Figure 6. AT&T documentation attribute ratings.**



---

completed only that section and at the end of Section III for respondents who had completed the entire questionnaire.

The comments and suggestions, when reviewed in entirety, give a representative overview of the general perceptions of AT&T documentation and the documentation process. They contain a sampling of general, wide-ranging recommendations ("make them better") and specific action items ("distribute a catalog of all AT&T documentation"). They include individual complaints and praises of organizations and documents. They make liberal use of current industry "buzz" words ("make the documents user-friendly"), and they reflect the genuine interest respondents have in improving the AT&T documentation process.

#### Summary

The results of this questionnaire reflect the opinions and suggestions of 415 internal AT&T documentation users, half of whom are also involved with documentation management, development, or production. Though many have vested interests in parts of the documentation process, they also represent a vast body of knowledge about AT&T documentation. Their experience and knowledge base is an important resource for examining the strengths and weaknesses of AT&T documentation and the documentation process, and their comments and suggestions merit close scrutiny.

The general conclusions to be drawn from these survey results include:

- Overall, documentation importance tends to range from very important to absolutely essential.
- The quality of documentation influences what people think of AT&T products and services.
- The most important attributes of documentation are technical accuracy and ease of use.
- Lack of documentation adversely affects sales and customer relations, causes additional time and effort to be expended, and prohibits installation/use/repair of AT&T products and services.

- On-line documentation is becoming more and more popular, but paper is still the overwhelming first choice.
- Documentation users like books that are complete, easy to use, contain the information they need, and are well written; conversely, they don't like books that lack detail/examples, are hard to use, and are wordy or not well written.
- An index or catalog of all AT&T products and all documentation products would be popular.
- AT&T documentation is rated highest on technical accuracy, attractive design, easy-to-understand documents, well-organized material, and well-written text.
- AT&T documentation is rated lowest on delivery attributes: not immediately available with product/service, not delivered in a timely manner, and unavailable or late updates.
- Improvements need to be made in the following areas:
- The overall documentation management/development system
- The timeliness of our documentation
- The ordering/stocking/distribution system
- The coordination and communication between customers, product developers, and documentation developers.

In the 2 years since the survey was performed, we have made substantial progress on the problem areas identified. Specifically, an AT&T-wide Documentation Board has been created and now oversees the management of the AT&T documentation process.

Substantial improvements have been made in our order-entry and distribution/delivery process, and the Documentation Board has established a number of major initiatives to improve the timeliness of our documentation. Recent feedback indicates that these actions are producing positive results.

*(Manuscript received May 1, 1989)*