

## 10. Documentation

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Within the field of technical communication, the term *documentation* generally refers to writing that describes the features and functions of complex systems. Since the 1960s, it has been most widely used in the computer industry or, more broadly, the industries called “information and computer technology,” or ICT. Within ICT, the term *documentation* and the role of technical communication have in large measure evolved together. This evolution can be examined through influential books such as those by Thomas F. Walton (1968), Edmund H. Weiss (1985), and William K. Horton (1990), and, more systematically, through the serial publications of the Society for Technical Communication (1953–present). However, for certain historical projects, such as this chapter, this evolution can be advantageously traced through the direct report by someone whose adult life has been co-extensive with the transformation of our culture by ICT and who was closely tied to the field of technical communication.

In 1964, the new high school that opened for my senior year in Clifton, New Jersey, included an administrative computing room with multiple refrigerator-sized units sporting big tape drives. We were surprised to receive report cards with grades that were printed out by the computer, not hand written in ink by our teachers. The computer also “powered” our language lab. About a decade later, as a graduate student, I learned that some folks were keyboarding their dissertations, not with a typewriter, but using WYLBUR, a mainframe-based text editor. Then, during my academic career in technical communication, I became closely tied to the world of computer documentation (aka “software user assistance”) and interacted in various ways with high-tech companies, small and large, including IBM and Microsoft and, later, Amazon and Facebook (now Meta). Because this historical review of the term *documentation* is primarily a personal *history*, I have cross-checked my recollections with ICT veterans Saul Carliner, Lori Fisher, Jo Ann Hackos, and Joe Welinske.

Outside of technical communication, documentation has generally referred to a text (or set of texts) that “furnishes evidence and *information*” (Oxford University Press, n.d.), often within a legal or regulatory context. If you wish to export a work of art from a nation, their customs officials will require appropriate documentation. To meet ISO 9001 standards for quality control in manufacturing, you must be able to provide documentation that verifies how your manufacturing processes are carried out. Documentation is now a contested concept due to resistance from transgender people and undocumented immigrants to dominant cultural narratives and governmental policies (Caminero-Santangelo, 2016; National Center for Transgender Equality, 2023).

Etymologically, the Latin root of *documentation* is *docere*, meaning to teach. However, documentation as a synonym for teaching is obsolete (Oxford University Press, n.d.). So, for example, no one now says, “She documented her students in mathematics.” But the idea that documentation provides instruction is inherent to the modern use of the term.

In ICT, the term *documentation* is deeply intertwined with the term *manual*. *Manual*, much like its sibling term *handbook*, originally connoted a relatively small, easily handled volume that directly supports some kind of specific use. Another close relative is *guide*, when used in the context of such publications as *The Complete Guide to a Successful and Secure Retirement* (Swedroe & Grogan, 2021).

In past centuries, manuals were often devotional. They guided you through the process of prayer. One of the most popular works of the renowned Renaissance Humanist Desiderius Erasmus is *Enchiridion Militis Christiani*. This guide to moral improvement was known to English speakers as *The Manual of a Christian Knight* (Tyndale’s 1533 translation). Later, the term *manual* became more centered on physical tasks—for example, Hans Busk’s (1858) *Rifleman’s Manual: Or Rifles and How to Use Them*. While a true manual in the modern sense, Busk’s procedural (how to) content is phrased with indicative paragraphs rather than the numbered steps and imperative sentences that are used now.

With growing industrialization, the general *public* became familiar with various kinds of manuals, including automobile maintenance manuals, which evolved greatly from their early origins (Ford Motor Company, 1919, as cited in Crabbe, 2012). The instructions that come with consumer products of all kinds are, except for their narrower scope and brevity, very similar to manuals (Crabbe, 2012; Leitz, 1937, as cited in Crabbe, 2012). World War II saw the production of a great many military manuals and a dramatic growth in the number of individuals engaged in technical communication (O’Hara, 2001). The rapid expansion of consumer culture after World War II resulted in a great proliferation of instruction booklets for the assembly and use of all kinds of products, technical and non-technical. It also led to the development of technical manuals for the professional servicing of such consumer products as television sets (Early Television Museum, 2023; Sams, 1958).

The core form of the manual, in ICT and elsewhere, is a hierarchy of task-oriented procedures sequenced in some approximation of likely use. So, for example, the manual’s introduction is the top node of the hierarchy, and chapters such as those explaining how to create, format, save, and print documents are at the second level. These chapters have sections, and perhaps subsections, that contain the individual procedures. Such manuals are very often termed “user’s guides.”

Computer documentation in the early days of the computer industry existed primarily in print and was a broad umbrella term for myriad texts related to the *design*, installation, operation, and repair of a (mainframe) computer system. In the 1960s and 1970s, computer use expanded from *research* facilities to the corporate world and, finally, with the advent of the microcomputer, to hobbyists, small business owners, and everyone else. However, the computer documentation of

this era, which was often prepared by developers rather than technical communicators, paid only inconsistent attention to the needs of computer users (meaning end users—those who simply wanted to get work done). Often, users were carelessly assumed to have sufficient expertise to make good use of a reference manual that did no more than define commands. They might or might not get a true user’s guide and/or a tutorial (a set of lessons that impart basic conceptual *knowledge*, provide instructions for fundamental tasks, and promote retention). At times, user manuals were merely modified design documents consisting in large part of nearly useless product specifications (Waite, 1984).

Gradually, however, the computer manual and manual set—for both hardware and software—evolved to meet the needs of a broad range of users. Furthermore, documentation increasingly became the purview of technical communication professionals. The contrasting terms *task oriented* and *systems oriented* (or *product oriented*) would appear to usefully distinguish between documentation written to support the work that users needed to do vs. documentation that focused on the system itself. Robert G. Waite (1984), an IBM information developer, identified the introduction of the System 36 midrange computer, in 1983, as the beginning of IBM’s commitment to task-oriented documentation.

Apple Writer II was the most important software application of the hugely successful Apple II Plus microcomputer (sold 1979–1982). The Apple Writer II “operating manual” (Apple Computer, 1981), despite its rudimentary formatting, is an instance of competent, user-friendly software documentation. Most of the manual is a hybrid of tutorial documentation and a user’s guide (with procedures formatted as numbered steps). The manual also includes a reference section.

Some of the best early end-user documentation took the form of article-length tutorials written by technical journalists in computer magazines published for the owners of particular microcomputers. A magazine for owners of the Tandy TRS 80 might feature an article such as “Chaining Short Texts with Scrsipit,” because the standard-issue documentation was especially inadequate in explaining this feature.

Largely under the influence of Microsoft, the standard print documentation set for a wide range of software products came into being in the 1980s. The primary components were three thick volumes: an extensive tutorial (sometimes with a supplementary floppy disk); a fully comprehensive, task-oriented user’s guide; and the (less often used) command reference. There were also many third-party computer books that followed the tutorial or user’s guide model.

Even when documentation existed primarily in print, online documentation had a significant role. Online documentation goes back as far as the “man page” command reference that was part of the early releases of the ubiquitous UNIX operating system in the early 1970s (“Man page,” 2023; McIlroy, 1987). Man pages were essentially pages of a large manual with simple formatting. They could therefore be displayed on a character-based computer terminal (monitor).

Online documentation has inherent advantages over print. Users do not need to reach for a physical manual, and there are sophisticated means of integrating

the online content into the software's user interface. Even when online documentation offered nothing more than the digital equivalents of the print table of contents and index, access to content was usually faster (Kearsley, 1988).

Online documentation evolved throughout the 1980s in a diverse manner. Pop-up annotations, often referred to as "field-level help," displayed brief explanations and instructions on specific elements of the user interface, especially where users needed to input text to complete online forms. Many software companies developed high-quality online tutorials that guided users through the core features of the product or in some cases were comprehensive.

Microsoft's Windows operating system, replacing DOS, was very widely adopted starting in 1990 with the release of Windows 3.0. With this release came the WinHelp (.hlp) help development platform (1990–1995). WinHelp offered technical communicators many implementation options, including a multi-level hyperlinked table of contents, an online index, search, a Back button to return to previously visited topics, a "browse sequence" enabling users to follow a pathway of help topics chosen by the help author, and hyperlinking from one help topic to another. Most important, WinHelp enforced uniformity across the help systems of the many software products that ran in Windows. Now, Windows users who opened a help system already knew how it worked because they had seen something similar in other products. WinHelp, however, was not well suited to tutorial documentation and had little impact on tutorials.

The central component of most WinHelp help systems was a hierarchy of task-oriented procedures with "overview topics"—not so different from the print user's guide where paragraphs of overview information would typically precede and introduce a cluster of procedures. There was also a command reference which, if context sensitivity was implemented, allowed users to display relevant topics directly from the user interface (Boggan et al., 1996).

Little by little, online help eclipsed the print user's guide in large parts of the computer world. Software companies began to favor thin "Getting Started" manuals that explained only core features of the product. Users were expected to transition to help as they made greater use of the product.

In addition, online tutorials eclipsed print tutorials during the 1980s. A problem that plagued print tutorials was that one mistake could throw the user out of synch with the next step in the tutorial, often making it impossible for the user to advance further. Online tutorials largely prevented this problem. If a user made an error, the tutorial would block the error, emit a "ding" sound, and in many instances indicate the correct action. Not only was online documentation, both help and tutorial, more functional than the various forms of print documentation, but adding one or two more floppy disks was vastly cheaper than printing and shipping thick books. Even so, the very considerable development effort required for online tutorials led to their gradual decline. Today's YouTube tutorials are relatively easy to develop but, like print tutorials, are not integrated with the software.

Newer forms of user assistance emerged that looked and behaved still less like print than did WinHelp (Boggan et al., 1996; Knabe, 1995). Wizards sidestepped the product's primary user interface and instead walked the user panel by panel through a limited number of tasks. Apple Guide and Microsoft Coaches/Cue Cards dramatically superimposed a series of prompts on the regular user interface as the user worked through a task. Certain Microsoft help topics actually operated the user interface—as some do today. These newer forms of user assistance were collectively termed “performance support,” because reading and acting were closely tied and because the focus was on enabling users to get work done, with less concern for promoting full understanding and retention (Farkas, 1998).

While essentially just a new generation of the old “field-level” pop-up annotations, Apple's Balloon Help and Microsoft's Tool Tips—both embraced by computer users—were more capable and looked and felt like something new, something we would not so readily term documentation.

Increasingly, the term *documentation*, with its roots in print, seemed to apply less well to user-facing online content. While the phrase “online documentation” remained—and still remains—in wide use, it is an older and even tired-sounding term. Technical communicators in the computer industry are likely to describe their work function as “user assistance” and “user support.” One will likely hear “I write online help and other kinds of user assistance” (or “other kinds of user content”) rather than “I write online help and other kinds of documentation.” Responding to this change in the industry, I changed the name of my course “Computer Documentation” to “Software User Assistance” in 2005.

A further shift in the history of documentation/user assistance has been the rapid growth of community support in ICT. Increasingly, software vendors leave it to users to answer each other's questions, although forum moderators and community managers often write FAQ and other documentation for the forum and point forum visitors to the relevant content that exists outside of the forum (Frith, 2014).

One area within ICT where the term *documentation* remains strong is software development. To pick just one example, Amazon Web Services, which primarily produces content for developers, identifies this content as documentation (<https://docs.aws.amazon.com>). The Agile software *project management* process calls for less extensive documentation than traditional processes (e.g., waterfall), but it is documentation just the same (Nispel, 2018; Rüping, 2003). On the other hand, in 2016, the Committee for Software and System Engineering of ISO, the International Organization for Standards, replaced the term *documentation* with *information for users* (ISO, 2023). So the full story of the term *documentation* in the world of ICT has yet to be written.

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