

design matters

December '98

An Interview with Richard Saul Wurman

Our role as technologist

by Bonnie J. Davis, Guest Editor

In a posting to the InfoDesign mailing list, renowned information design consultant Richard Saul Wurman wrote that individuals who cross the boundaries of the following three groups have the "potential" of being information architects [or designers]:

- Thoughtful graphic designers
- Creative information technologists
- Writers and journalists

For this issue of *Design Matters*, guest editor Bonnie Davis talked to Wurman about our role as "creative information technologists."

The newsletter of the STC Information Design SIG

Understanding How Tools Affect Content

Wurman divides the production of information into two areas: *bells and whistles* and *understanding*.

"You can also look at it as bells and whistles versus content," says Wurman. "Technology deals with the bells and whistles. Technology is the enabler. It includes all the tools available to create content.

"Each tool affects the way you can express something. The way you can express, changes what you can express. It changes what you can think of and how you can express yourself. As technology changes, it increases our ability to think up new ideas. "How we communicate with each other and future developments in information technology are inseparable.

For example, we relate differently with people now because of email, fax, and the phone. These abilities and availabilities to communicate allow us to think of certain new ideas and new forms and patterns of things that we can only accomplish now."

Knowing How Much Tech Knowledge is Sufficient

"Information architects should understand all three fields [graphic design, technology, writing/journalism]," says Wurman. "Individuals are naturally more specialized in one field than another." Wurman says information architects should understand the work of the technology specialists. Here we are not talking about the information architect as technician, but technical specialists, such as computer programmers and videographers.

"Information architects must understand the essence of the technology. And, information architects must be able to give good instructions. I'm stupid on the computer, but I know what I can ask the technologists to do, and give clear instructions to accomplish what I want done."

Being the "Creative" Technologist

According to Wurman, the work of the information architect as technologist should go beyond 'good' to 'creative.' "Look at it as the 'art' of information technology. It's not just function, but performance. Performance is like theater. It is art."

Wurman is currently working on a new way to present web pages. "Most web pages use the metaphor of a cockpit of an airplane," he says. "There are lots of dials, bells and whistles. There is so much that you don't know what to look at. It is a misnomer that maximum choice itself is really good. On a web page, people don't want many choices. They need good simple choices and explanations of those choices." For Wurman, designing a web page is about clarity, not simplicity. It is also about including humanity in the design.

Clarity. "Simplicity is not the solution. Simplicity is the taking away, the dumbing down of informa-

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Embracing Our Role

by *Bonnie J. Davis, Guest Editor*

As we build the foundation for the Information Age, businesses are struggling to understand information needed for maintenance and growth within their organizations, customer bases, and industries. Companies are looking for ways to convert, document, format, organize, store, secure, filter, transmit, and manage information for both employees and customers. In many cases they are looking to tools to help with these processes. Document management systems, data warehouses, groupware, the Internet, intranets, and various training and knowledge bases represent "new" tools companies are using in attempts at getting a handle on their information. It is critical that information designers embrace our role, at least in part, as information technologists. We should be involved in defining how these new tools are used for information development and delivery.

As information designers, we know the primary objective is to deliver understandable and useful content. We know that technology alone cannot yield the primary objective, but we must use technology to help us get there. In addition, demonstrating our ability to use technology gives us added credibility. Sometimes this can make others receptive to what we can deliver as information designers. Whenever possible, we should be involved in designing, developing, and managing new information development, storage, access, and delivery tools. We should be included in the strategic meetings where company leaders define tools that will be used and how they will be used.

This is what we have studied, trained, and worked for. For decades, we have been analyzing audiences and their information needs and building products to meet those needs. We know audience analysis, information analysis, needs assessment, information design, research, interviewing, writing, chunking, indexing, and evaluating usability of information for print and electronic media. We must also know information technology.

Back in the late '80s, a new technical writer joined a team of contractors developing software documentation. The writer was well known for his design and writing talents. What we learned was that he did not know how to use a computer. He was still using a typewriter to develop his material. His contract was terminated his first day on the job. Tomorrow, the information designer who does not know information technology may be out of luck and out of work. We cannot afford to be terminated, or not heard, at this critical stage of the Information Age. We must embrace our role as technologists and exhibit it as one component of our role as information designers.

Bonnie Davis is President of IDD Solutions, Inc., an information design and development company in Atlanta. You can reach her at bdavis@iddsolutions.com.

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Assistant Manager, Managing Editor

Beth Mazur
1114 S. Alfred St.
Alexandria, VA 22314
202-434-2991
mazur@pobox.com

Assistant Editor

Norman Stahlberg
stahlberg@acm.org

SIG Manager

Cheri Taylor
taylorcw@compuserve.com

Chair, ID SIG Advisory Panel

Karen Schriver
schriv@cmu.edu

Membership Coordinator

Michael Albers
malbers@acm.org

Submissions

We welcome submissions from SIG members for publication. Submissions via email are appreciated. Please send to mazur@pobox.com.

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society for technical communication

901 N. Stuart St., Suite 904
Arlington, VA 22203-1854
(703) 522-4114

■ <http://www.stc-va.org/>

SIG News

by Cheri Taylor, ID SIG Manager

Greetings to our 1700+ members, especially the new members for whom this is their first newsletter!

One of the "future" goals I mentioned in the last issue was that of doing a special issue or section of *Technical Communication*. Our membership coordinator, Mike Albers, stepped forward for this task. Currently, he has a handful of authors committed to submitting articles for a May 2000 issue.

There's another project that we're looking into that sounds really exciting! The University of Reading Department of Typography and Graphic Communication (UK) and the Communication Research Institute of Australia have initiated a project to merge their bibliographical databases into a joint Information Design Database available on the Internet. We're considering helping the project as a "partner" by compiling and annotating entries for the database. In return, our members would have access to the database. If you would like to help us, please send email to Beth Mazur (mazur@pobox.com).

Please consider attending the annual STC conference in May. We have many activities related to information design planned. Welcome to Stephanie Ramsey, who has recently volunteered to be our conference coordinator this year! Send Stephanie email at sbt4@cdc.gov if you have any suggestions for her.

We plan to enter our web site (stc.org/pics/idsig) in the STC Public Relations competition this spring. Webmaster Lisa Pere (dandlpere@earthlink.net) and her team of helpers have been updating and enhancing the site in preparation. Lisa is looking for anyone interested in contributing a feature or a "what's new" piece. Or if print is your game, please send email to editor Norman Stahlberg (stahlberg@acm.org). He welcomes your contributions, comments, or offers to be a guest editor for an issue of *Design Matters*.

Time for a change...

I have thoroughly enjoyed being the manager of this fantastic group of information designers. I can't begin to count the number of wonderful people I've met and the many things I've learned about information design, STC, and managing a SIG. I would not trade the experience for anything! I'd like to thank Beth and the STC board for supporting me as the SIG's first manager.

Now the time has come to think about the SIG's next manager. If you would be interested in being considered for this important job, please email me at taylorcw@compuserve.com. The position will start

in June 1999. With Beth continuing as assistant manager and me as immediate past manager, the transition will be a pleasant and productive one for you and the SIG. We're looking for a senior STC member who is responsible and enthusiastic about information design!

Best wishes in the upcoming holiday season!

Cheri Taylor is the owner of TechWords and the manager of the ID SIG. She can be reached at taylorcw@compuserve.com.

ID Bookwatch

Visual information for everyday use: Design and research perspectives

Harm Zwaga, Theo Boersema, Henriette Hoonhout
Taylor & Francis, ISBN: 0748406719

This book discusses the methods and methodology of design and applied behavioural research concerning the creation of graphical communication for public use. Its core consists of overviews presenting the state of the art in the main areas of information design. Each overview is accompanied by two or three case studies.

Information graphics: Innovative solutions in contemporary design

Peter Wildbur, Michael Burke
Thames & Hudson, ISBN: 0500018723

The organization and presentation of information is one of the most important but least recognized aspects of the design profession. More visible than the work of any other kind of graphic artist, information graphics are all around us—but how do designers arrive at such elegant and useful solutions to complicated problems?

Covering a broad spectrum of material, this book presents an international selection of examples of designs that make our cities and businesses function smoothly. The authors offer detailed commentary on how each design came to be, how it responded to the client's needs, and why it works. Within each chapter are case studies that examine a single project in depth, from the client's initial request to the finished product.

InfoDesign Bookwatch is compiled and edited by Piet Westendorp and Karel van der Waarde. It is a regular item on the InfoDesign discussion forum. To subscribe to InfoDesign, send an email to: majordomo@wins.uva.nl saying: subscribe InfoDesign. This item reprinted with permission.

Mark your
calendars for
Cincinnati,
May 16-19!

Document Management Vision

by Betsy Shackelford

Before becoming development manager of the document management tool for Geac's SmartEnterprise Solutions division, I was a technical writer at Geac. I was driven to express my opinions about the tools and where the whole tools and document delivery process was going. I also wanted to be involved in making it happen.

Envisioning the Document Management Tool—I am not overly technical, but I have a vision of how the document management tool and our documentation should be managed and presented to our customers via the WWW. Because I had "big picture ideas" when I worked as a writer, I got involved in the writing tools decisions, including participating in JADs (joint application design sessions) where we discussed the future for managing our documentation. About four years ago, while I was still working as a writer, my manager asked me to develop a mockup for the WWW. Because I had used the markup language BookMaster, it was an easy transition for me to move to HTML. Working with HTML lead to administering the early version of the (then Dun & Bradstreet Software) web site and writing standards and guidelines for it. I also worked on the pilot team that developed our first light client product written completely in Java.

The documentation group's tools expert and I started this whole document management tool with ideas that we came up with during informal brainstorming sessions and validated in a JAD session. The first vision was of a tool we called the Information Management and Delivery System (IMDS). We wanted to deliver end user documentation over the WWW, integrated with marketing white papers, sup-

port information, and any other information for our customers. We wanted a tool that would accept many formats and output in several formats. Back then, we were looking for an SGML single-source solution, with an outer translation layer. Early on, I took a week-long SGML class. I spent about a year writing proposals and position papers and negotiating with vendors who might help provide a solution for us. Costs became the issue: the costs of buying the tool to create the translation layer, performing the document analysis, and creating the metainformation. A one-source SGML solution would work well with large volumes of information. For example, it probably would work for the Library of Congress or an aircraft manufacturer. The ensuing year has validated that position. Many other companies initially interested in SGML have backed off due to similar cost issues.

Building a Quick Fix that Works—After some frustration with a vendor, the director of Support Tools Development asked if we could come up with something quick, something that would work with an information tool we already had available to our customers on the WWW. What started out as a short-term solution became the basis for our long-term solution, which we call DocLink, part of our AnswerLink suite of customer support and information tools. AnswerLink is also used for messages, newsgroups, bulletin boards, cases, and solutions—all designed to meet customer information needs.

DocLink provides a means for our customers to view, search, and print our documentation from the WWW. Customers benefit because they no longer wait for releases to get updates of printed manuals. Information is updated online and quickly made available to customers. A date search feature lets customers search for only the updated information. We modified the single source concept for document management. We use Microsoft Word as our source, then create HTML and Adobe Acrobat PDFs. Documents are maintained in Word. The HTML files and PDFs are throw-away files. We provide our customers CDs that include the HTML files and instructions for customers to add links to their own information.

We chose not to maintain documents in HTML as its capabilities are limited to formatting. Something better will come along when standards, tools, and browser support of tools mature. Tools will provide much of the strength of SGML without all of the complexity. XML has promise.

Using Technical Communication Skills—The two critical technical communication skills that I brought to the table for document management were: (1) knowing how to organize information, and (2) understanding the document development process.

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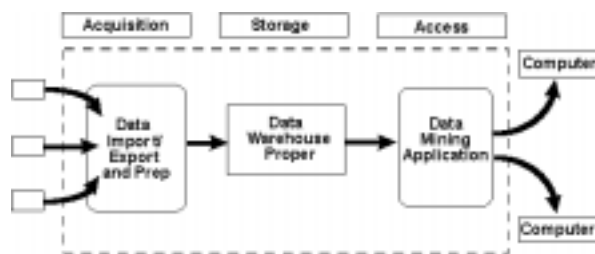
Data Warehouse Initiatives

A Role for Information Designers?

by Donn Le Vie, Jr.

Data warehouses are assuming an important role in helping to manage and access corporate data for decision support in many organizations. Most businesses must contend with information that is distributed across several computer platforms that range from workgroup applications to corporate mainframes. Information can be shared among different systems, thanks to client/server technology, but archiving that information in various formats creates problems when that information needs to be compared. Data warehouse technology allows information to be stored in a consistent format to facilitate comparisons for decision-making support.

Very simply, a typical data warehouse project consists of three major components: data importing/exporting component, for data acquisition; data warehouse component itself, for data storage; and data mining component, for extracting meaningful relationships among data in the warehouse.



The three components of a data warehouse system (Simplified from Rob Mattison's "Data Warehousing: Strategies, Technologies, and Techniques", 1996)

Data warehouse initiatives are typically driven by business objectives. The primary responsibility for implementing data warehouse initiatives usually resides with information technology (IT) and/or information systems (IS) organizations, as the following criteria suggest.

Criteria for a Data Warehouse

From "Siftware [sic]: Tools for Data Mining and Knowledge Discovery," www.kdnuggets.com:

Load Performance—Load performance requires incremental loading of new data on a periodic basis, without artificially constraining the volume of data.

Load Processing—Load processing includes converting data, filtering, reformatting, checking integrity, physically storing the data, indexing, and updating metadata.

Data Quality Management—Quality management must ensure local consistency, global consistency, and referential integrity.

Query Performance—Query performance must not be slowed or inhibited by the performance of the data warehouse relational database management system (RDBMS).

Terabyte Scalability—The RDBMS must not have any architectural limitations. It must support data warehouse sizes that are growing at astonishing rates. The system must also support parallel and modular management.

Mass User Scalability—Access to warehouse data must not be limited to the elite few; it must support many concurrent users while maintaining acceptable query performance.

Networked Data Warehouse—Users must be able to look at and work with multiple warehouses from a single client workstation.

Warehouse Administration—Large scale and time-cyclic nature of the data warehouse demands administrative ease and flexibility.

Integrated Dimensional Analysis—Dimensional support must be inherent in the warehouse RDBMS to provide the highest performance for common analytical operations.

Advanced Query Functionality—End users require advanced analytic calculations, sequential and comparative analysis, and consistent access to detailed and summarized data.

From the warehouse criteria, it appears that the majority of required skill sets will be in the following areas: hardware, operating systems, networks, GUI/windows environments, programming languages, database software, and data mining tools.

Value Added

Staffing requirements for data warehouse initiatives depend on the size and scope of the overall project. The larger the project, the easier it is (generally) to identify specialized skills and responsibilities. Smaller projects require fewer people with a broader range of skill sets. Information designers' most valuable contributions can be in the areas of interface design and business and operational modeling.

Interface Design—Information designers can contribute in the area of integrated dimensional analysis, where online analytical processing (OLAP) and data mining tools require the development of user interfaces that are easy to use and understand. Knowledge acquisition tools demand that expert sys-

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Selecting Web Tools

by John Martin

Selecting the right set of tools for web development is, at best, a hit or miss proposition. Most developers just try to thumbnail the requirements and leverage the knowledge of the programming team. Often, the programming, design, and server groups, led by the well-intentioned webmaster, make the tool selections based on one of three criteria: what they have used, what is rated by the techno press, or what is recommended by the server manufacturer.

The Information Architecture process provides not just the adaptive framework for designing web sites and solutions, but the framework for rational tool decisions as well.

"Information Architecture is the science of figuring out what you want your [web] site to do and then constructing a blueprint before you dive in and put the thing together," says John Shiple in his crash course on Information Architecture (Webmonkey). Information Architecture (IA), in its web incarnation, is made up of five processes that help define the web site: site goals, user experience, content and functions, site structure, and design. As you work through the IA processes, you can define the tools you need to build the site that accomplishes your goals. Tools selection should be a part of your final blueprint.

Sample Case—A sample case is probably the best way to illustrate the way tool selections fall out from the IA structure. The Albatross Group, Inc. (AGI) has decided to build an intranet web site as a communications tool for its mariners at sea. Being a progressive company, they started the development

by completing the following tasks: defined and ranked the site's goals; created a list of audience profiles; defined how each audience should interact with the site; built use cases and user cases; created numerous scenarios; built a chart of their competitor analyses; identified, grouped, and labeled their content and functional requirements; and began to define the web site's navigation paradigms according to their proposed site metaphor in order to differentiate from the maritime navigational paradigms.

They are now about to begin design work. They decided that paper might be acceptable for storyboarding but they will probably want to start acquiring tools at this time. To narrow the choices for their toolkit, they first refer to the IA document where they grouped and labeled the content and functional requirements of their Phase I site.

AGI identified the following three content categories: **Company News**—Current company news, updated daily and personalized for the user; **Family Room**—Chat room for mariners and their families; and **Chart Room**—Real-time weather, ocean currents, time-to-port information. With a closer look, tool requirements begin to emerge.

Tools: All Sections. All sections of the web site require basic output formats such as HTML, GIF, and JPG. Because this is an intranet where they can probably define the browser type, they may want to use DHTML or XML that can provide more flexibility for web design. They can choose a browser they know will support DHTML or XML.

Tools: Company News. Company news must be updated daily. The maintenance tool must be very easy to use by a non-technical person and feature one-button, transparent publishing. Tool output must be compatible with the output of more hardcore development tools. The site design may need modification to support look and feel requirements.

Tools: Family Room. This chat room software may be acquired from a vendor and integrated into the site. Java, JavaScript, and/or DHTML tools may be required.

The server will require ASP (Active Server Pages), JavaScript, or CGI (Common Gateway Interface) scripts.

Tools: Chart Room. This seems to be three applications in a single interface. The first and second applications, real-time weather and ocean currents, as applied to an ocean-going vehicle, require some serious coding tools, probably using a client-side applet for motion display. Time-to-port informa-

Figure 1. Matching tools to product needs.

AVAILABLE PRODUCTS	PROJECT NEEDS							
	HTML	DHTML	JavaScript	Java	ASP	Perl	Ease of Use	Speed of Development
MS Word	X						XXX	N/A
MS FrontPage	XXX	X	X		X	X	XXX	XXX
MS InterDev	XX	XX	XX	XX	XXX	X	X	XX
Netscape Composer	XXX	X	X		X		XX	XX
SuperCode				XXX			X	XX
J Builder				XXX			X	XX
JScript	X	X	XXX		X		X	X
Nitepad	X	X	X	X	X	X	N/A	X
DreamWeaver	XXX	XXX	XX				XX	XX

X = Adequate, XX = Competent, XXX = Very good.
XML was not considered because currently very few products support it.

tion is a trivial client-side calculation that can be accomplished using JavaScript. Based on the information above and a certain amount of “tribal” knowledge, the architect at Albatross builds a table matching products (tools) to the project needs (see Figure 1).

Note: Many people use numerical scores. Numerical scores are most useful when comparing apples to apples (such as Java development environments or pure HTML editors) but tend to be deceiving in the more apples to oranges environment of web development. The following comments and limitations helped the team categorize and rank the products.

MS Word—Not suitable for sophisticated publishing. May work well for company news.

MS FrontPage98—May work well for company news using the FTP upload feature. Not usable to create and maintain a high-load web site. Tends to re-write hand-written DHTML and JavaScript.

MS InterDev 6.0—Not suitable for web novices. Strong tool for all other development efforts here. Tends to re-write code (badly) to suit itself.

Netscape Composer—Basic HTML and DHTML editing tool. Good for publishing.

SuperCede—Strong applet and server-side Java tool. Not suitable for novices. Not suitable for any other use. Has difficulty importing other company’s Java beans. Good debugger.

J Builder—Strong applet and server-side Java tool. Not suitable for novices. Not suitable for any other use. Fair at importing other company’s Java beans. Good debugger.

JScript—Fairly inept tool. Is intended to create JavaScript but the code it creates is only usable in Internet Explorer.

DreamWeaver—Strong tool for intermediate to expert developers. Keeps most code intact.

Ultimately there are many assumptions in creating tool tables. The biggest assumption is that by compiling and rating a list of options, we have surveyed the field. This is not true. What we have accomplished is “due diligence” and that is a good thing. The overriding value is that we used the Information Architecture processes to help define the tools required to deliver the web site that is most useful for our audience. They also provide a way to deal with the politics of development and the “true believers” on projects. [“True Believers” denotes zealots for particular vendor products.] The most time-consuming part of this is identifying (and learning) enough general and special-purpose tools to make the comparisons involved in this technique worthwhile.

John Martin considers himself a semi-sweet chocolate kind of geek who can usually be found at Born Information Services, Inc. You can reach John at john.martin@born.com.

Data Warehouse

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tems model real-world processes. Knowledge acquisition and management lies within the realm of the information designer.

Business and Operational Modeling—Another area where information designers can benefit a data warehouse initiative is in business and operations modeling. This work requires familiarity with processes being modeled and solutions being developed. Information designers can research, analyze, and report the types of business problems end users are trying to solve with a specific data mining tool.

Example: Motorola’s DWMS

The Data Warehouse Management System (DWMS) for Motorola’s Semiconductor Product Sector (SPS) is a distributed database management system that enables simultaneous access to data warehouse nodes around the world.

The DWMS objectives were to: reduce email dependency and mail list maintenance, reduce the amount of time devoted to distributing documentation, provide an automated problem notification capability, and maintain consistency with standard data warehouse (SDW) architecture. Data warehouses link read-only data and associated sharable procedures. The collection of data warehouses is connected through a peer-to-peer network and logically via a common set of intercommunicating programs.

The SDW team determined that a web interface would be the best solution for presenting a common interface to internal SPS clients, which would result in a “pull” by the clients for information on an as-needed basis versus the current “push” of information from email.

Data Warehouse Team—For this particular initiative, the data warehouse implementation team consisted of: project manager, project leader, database administrator, systems developers (three), and a data warehouse consultant (specializing in helping define business and operational modeling).

Information designers were not part of the core team. Information designers with web site development skills were consulted during the process that linked web home pages to SDW documents; however, their participation in this project was limited to this phase.

Donn Le Vie, Jr. is information development project leader for Motorola’s Imaging Systems Division in Austin, Texas. You can reach Donn at ra2555@email.sps.mot.com.

Helping Spread the Knowledge

by Bonnie J. Davis

Design Matters (DM) asked technical communicators and knowledge base developers Jack Massa and Elinor Knodel to respond to several questions about the role of information designers in developing knowledge bases. Massa responded via email and Knodel via telephone interview. In context for this issue of *Design Matters*, a knowledge base is viewed as a tool to store and access knowledge assets of a company. The knowledge assets may be technical or procedural information that can help the company and its customers work more effectively and efficiently together. Massa's focus is more outward on the customer. Knodel focuses on sharing knowledge among workers within companies.

Massa's Knowledge Base is maintained at <http://www.guidancecom.com>



DM: What do you think is the most valuable contribution information designers can make to the development of knowledge bases?

Massa: Assuming there is already a knowledge base initiative in place (that is, an effort to gather knowledge and make it available in an online vehicle) then the most valuable contribution is that of writer and editor. These are the same roles we have traditionally filled for other publication platforms: analyze the audience and their needs, structure the information so that it communicates well, and, very importantly, provide sufficient context so that the information answers the audience's needs. In other words, make sure there is enough information and that it is presented in a usable way.

Knodel: I think our most valuable contribution is as consultants. It's more than just the tools we use to build the knowledge base. As consultants, we can

have an impact on the tools, organization, and culture. If we build the tool, users will not necessarily come. There are a lot of people who will read information in a database, but they won't post to it. We have the capability of bringing the technology to users and working with them to change the organizational culture so that they value sharing information. We usually help people share and use the knowledge they already have.

DM: What are the primary development and maintenance tools?

Massa: You see a wide range of tools for developing knowledge bases, from simple HTML editing tools to proprietary databases and systems using artificial intelligence. I think for small organizations, you can do an awful lot with just basic HTML and a good search engine.

Knodel: We are using Lotus Notes to build internal knowledge bases for discussion, troubleshooting, and best practices. I have been using Notes for 1.5 years. It's a powerful tool, but only one of many alternatives in groupware. Collaborative Strategies' web site at <http://www.collaborate.com/> is a good information source about electronic collaboration tools.

DM: Do you think information designers can effectively design knowledge bases without understanding the underlying tools required to develop and maintain them?

Massa: Certainly, you have to understand your basic authoring tool, be it a word processor or HTML editor. But as to the technical tools used for WWW development or database administration, no, I think the roles are distinct. The information designer needs to understand the technical tools only insofar as they impact or restrict the presentation of the information. For example, you have to know how to code keywords into an article so the search engine will find it, but you don't have to understand how to set up and troubleshoot the search engine, that's a different job.

Knodel: When I started working on Notes databases, I did the front-end work and an IS [Information Systems] person built the databases. Now, I also build databases. I am not particularly a tools person, but my work is forcing me to be that way, because there is a business need for it. Here at DuPont, we must show that we add value. Yes, a dollar value. In the past I was writing reports for people. Now, most people can use a word processor to write their own reports. Users don't want to design their databases. They just want a place to store and access their knowledge. I add value by building the databases, and by showing users the value in using and maintaining them.

DM: In your work and research, are you seeing information designers working on knowledge bases?

Massa: I think this is happening more and more, especially in larger organizations. Initially, knowledge bases were started by organizations other than technical publications groups, especially support organizations. But more and more, technical writers or information designers are getting involved in the design of the content. You can see this on the WWW. One and two years ago, most "knowledge bases" were just FAQs [frequently asked questions] or collections of support call logs. Now, more and more, the knowledge bases are well-written and well-organized, showing the results of information designers' involvement.

Knodel: Of 30 people in my group, about six of us are actively engaged in developing technical and business knowledge bases for various DuPont businesses. Some people in my group are also working on extranets that provide information for our suppliers and customers. We are much more involved in applications development, as we design functional environments for others to fill with their information and knowledge.

DM: What is your Number One Tip for information designers who want to be involved in developing knowledge bases?

Massa: Get involved in the technical support end of things. Most of the content for knowledge bases is problem-solving and support information. This kind of information usually doesn't come from development teams, but from support groups and customers. It's worth crossing the traditional boundaries because this is a real growth area for information designers.

Knodel: We are headed more towards applications development. For that work, I think it's critical for us to understand our clients' underlying business processes. More front-end analysis is required than ever before. As we refine our understanding of the business processes, we can better identify the information that will be truly useful for clients to develop and capture in knowledge bases.

Elinor Knodel is an Information Designer in the Information Design and Development Group at DuPont Company, an internal staff group that also provides services for external clients. You can reach Elinor at Elinor.L.Knodel@usa.dupont.com.

Jack Massa is Principal of Guidance Communications, Inc., an Atlanta consulting company specializing in communications services for high-tech firms. He can be reached at jack@guidancecom.com.

Document Mgmt.

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In document management, we must look at chunks, or blocks, as core pieces of information. The block concept comes from the Information Mapping writing methodology. It is very expensive to manage information at the block level. What we decided was to move up a level to what Information Mapping calls the map level, which we work with in DocLink as a topic. My familiarity with writing processes and the workflow was also helpful. We hope to include a workflow component in a future release of DocLink to automate the process of moving documents through the writing development cycle.

My job now is to provide a tool and manage production of libraries in our formats. Sometimes I can quickly advise writers on how to better organize, or chunk, information in ways that are better for the tool as well as better for the end user of the information, but in general, I rarely get involved with the content.

My Document Management group is part of the Support Tools Development organization. My team includes two developers, a senior systems analyst and a Word template developer; and an application expert. The developers use Visual Basic and the documentation is stored in an SQL database. The template developer writes Visual Basic code to convert documentation to HTML that meets our standards for look and feel. The application expert handles quality assurance and production issues.

Betsy Shackelford is DocLink Development Manager at Geac Computer Systems. You can reach her at Betsy.Shackelford@geac.com.

Help Wanted!

- **SIG Manager**
(starts June 1999)
- **Feature writers,**
ID SIG web site

See page 3 for more details!

*We have all heard it said that one picture is worth a thousand words.
Yet, if this statement is true, why does it have to be a saying?*

—Walter Ong, *Orality & Literacy*

Effective Design with Limited Tools

by Miles Kimball

Recently, I spent several weeks a thousand miles from home as a contractor for a telecommunications giant, writing, designing, and producing a short-run manual and quick reference card for a proprietary software package. Although the department I was working with had plenty of money—a \$20 million budget, someone told me—they didn't want to spend a couple of thousand to buy software I would be using only one month. For whatever reason, your company or client may not own or be able to buy all the design tools you'd like to work with. Here's some common sense advice—learned the hard way—on how to make the most of what you've got.

Advice for the Technology-Lorn: Limit Your Frustration—Getting hot about the situation certainly won't improve it. Remember that you're not to blame for less than perfect output if you have less than perfect tools to work with, and that, after all, you're still getting paid. Or if it helps, think of it as an opportunity to use your creativity—can you make it out of the corporate wilderness with only a survival knife and a copy of Microsoft Word and still look good?

Stump for Compromises And Be a Savvy Politico While You Do It—The worst thing you can do in situations like this is to whine. Instead, see what compromises might be available. When I set out clear objectives and a convincing rationale, my client agreed to fund time at Kinko's so I could do the quick reference card using their copy of PageMaker. My argument: because I was working on the clock for a hefty hourly wage, the employer would save money in labor costs if I could use industry-standard software to complete the task more quickly.

Communicate Clearly About What Your Client Can Expect—The sophisticated layouts we tend to do today depend on sophisticated tools. Tell your client or employer what you can deliver with the tools available to you, and there won't be any possibility of disappointment with your work. Also let your employer know that working with limited tools generally takes more time. You want to communicate a reasonable expectation of a delivery date.

Assess What Tools You Do Have—Working with out-of-date tools, like running Photoshop on a 486, can feel like cheering on erosion. But if you give the tools a chance, you may be surprised at what you can get them to do. A case in point: in two jobs I've done recently, I had only Microsoft Office to work with.

I'm the last person to argue that Word is anything but a bloated word processor—definitely not even in the same league as FrameMaker or PageMaker for document design purposes. (Don't even get me started about Word's problems with long documents!) But given the need, I found new ways to put Word through its paces. It's clumsy and time-consuming, but you can make Word do many of the simpler things we depend on more sophisticated programs to do. Just like the promotional information on the box says, you can place text and graphics anywhere you like on the page—it just takes endless and frustrating tweaking to get it to look anything close to right. And remember that you don't have to use tools in the way their creators intended. Thinking of the importance of tables in web page layout, I was able to use Word97's flexible table creator to give some of my pages a bit more sophisticated grid system than Word's basic columns allow. It wasn't convenient, and it wasn't what the folks in Redmond had in mind, but it worked.

Explore Shareware and Demo Alternatives—In my experience this year, I was able to download a graphics program evaluation copy that allowed 30 days of use—just enough time for me to do the job. And since I'm already a fan of that product and use it at home, I didn't feel bad about using it remotely for a few days.

Go for a Classic Look from the Roots of Design and Layout—If you need to, sell it as "simple sophistication." Even limited tools can generally do the basic layouts you learned in Document Design 101, so dust off your Jan Tschichold and go to work. It might seem boring to you, but most readers won't mind. [Tschichold's *The New Typography* was once considered the definitive treatise on book and graphic design.]

Besides, some of our most important readers—the clients and employers who pay our fees—don't share our sensibilities about design. Though we hate to admit it, many of the finer points are lost on these people, who don't have the training or inclination to evaluate design very critically. Sometimes a simple, familiar layout will look better to these readers than something avant-garde. Finally, remember that cutting and pasting used to be actual cutting and pasting—don't let yourself think you're above doing both in a pinch. Think of your printer as a digital typesetter and the photocopier as your production press—after all, even those everyday tools are more sophisticated than the typesetters and presses of a couple of decades ago.

Miles A. Kimball is Director of the Professional Writing Program at Murray State University, and he works as a Consultant/Contractor in technical communication. You can reach Miles at miles.kimball@murraystate.edu.

Richard Saul Wurman *...continued from page 1*

tion. Maybe simplification makes some things look better, but the solutions are not to be found in just looking better. "I'm talking about giving clarity of how you find your way. Provide a couple of choices at one moment, not a menu of choices." He uses the analogy of a conversation to better explain his points. "Think about conversation. Conversation is the most natural and the most complex way we communicate. Conversation follows a path, although it can wander. There is a connectivity and cartography."

Humanity. The need to consider the human factor is the basis of Wurman's comments about humanity. "Humanity is not in current web page design. Designers are not thinking of the person using the web page. They think only of themselves and ask, "Does it work?" And it may pass their own checklist, but this does not cover the human element of the user." Wurman says an example of this new web design will be available in the web presentation of information generated during the TED Conference (TED9 and TEDX). The TEDX version will include an Atlas of Understanding of the American Condition.



Richard Saul Wurman

The TED Conference examines the merging and converging of the technology business, the entertainment industry, and the design profession in the service of learning and communication.

Serving the God of Understanding

The bottom line for Wurman goes back to his passion to make things clear and understandable. "The information architect must understand the technology as it relates to the understanding of information.

Ultimately, we all serve the God of understanding. For information architects, the essence is understanding. Not designing bells and whistles, but designing understanding."

Richard Saul Wurman is the author of 65 books, including the best sellers *Information Anxiety* and *Information Architects*. He is also the founder, chairman, and creative director of the TED Conference.

Richard Saul Wurman can be reached at WurmanRS@aol.com. For more information about TED,

visit the TED web site at www.ted.com.

Bonnie Davis is President of IDD Solutions, Inc., an information design and development company in Atlanta. You can reach her at bdavis@iddsolutions.com.

Richard Saul Wurman: Revealing Secrets

- *On designing information that is understandable:* "We must understand what it's like to not understand. Then and only then can we make something understandable."
- *On moving from 'potential' to 'being' an information architect:* "Passion and curiosity are the two words that define what takes an individual from 'potential' to 'being' an information architect."
- *On his three information architecture fields:* "Information architecture is similar to TED because they both represent the merging of three fields. TED merges technology, entertainment, and design. For information architecture, the three fields are technology, graphic design, and writing/journalism. The catalyst, or turning point, for the information architect is when the architect realizes that the three fields are one." ◆

Information Design

The field of information design applies traditional and evolving design principles to the process of translating complex, unorganized, or unstructured data into valuable, meaningful information.

The practice of information design requires an interdisciplinary approach which combines skills in graphic design, writing and editing, instructional design, human performance technology, and human factors.

Although its reach extends far beyond traditional boundaries of technical communication, the essentials of information design profoundly affect our work. The products of information design occur in any domain in which clear communication is essential, from those familiar to technical communicators, such as reference manuals and online help systems, to those outside the traditional realm of our work, such as public signage in public buildings, insurance and tax forms, and user interface design.

Our Mission

The mission of our SIG is to meet the professional development needs of our members and to act as a vital conduit between STC and information designers at large. Our objectives include:

- advancing awareness of information design among STC members;
- assisting members interested in acquiring information design skills;
- encouraging information design research and making available information design resources;
- examining the roles and practices of the information designer;
- and providing a forum for the discussion of relevant topics.

Please visit the ID SIG website at <http://stc.org/pics/idsig/>



The Information Design SIG
c/o Beth Mazur
1114 S. Alfred St.
Alexandria, VA 22314