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A **USER'S**

*** CYBERPUNK, VIRTUAL REALITY, WETWARE,**

GUIDE *To*

DESIGNER APHRODISIACS, ARTIFICIAL LIFE,

The **NEW**

TECHNO-EROTIC PAGANISM, AND MORE

EDGE ***



Cyberpunks

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HUMBER Text

TED NELSON'S XANADU

The idea behind **Xanadu** is to have a common publishing repository for the writings of humankind. A published document becomes part of the universal repository that can then be accessed by anyone and to which anyone can make **Links**.

TED NELSON'S XANADU: These links arise from an interview with Ted Nelson. A graduate of Swarthmore and Harvard, Ted Nelson is a dynamic orator, a rogue intellectual, a magnificently theatrical idea-man, and one of the few real shamans of the personal-computer movement. In 1974 he self-published an amazing tract called *Computer Lib/Dream Machines*,[▲] which coined such great Tedisms as "Everything is Deeply Intertwined" and "Simplicity is the Ultimate Sophistication." Ted's vision of Xanadu, or what will replace the printed word, was presented at the Eight World Computer Congress in 1980. An ever-evolving version of this talk is available as *Literary Machines*.[▲] Ted's interests also include social reform and personal sexual liberation.

XANADU[▲] is the company created by Ted Nelson to make an electronic alternative to conventional publishing. Xanadu's logo is the Eternal-Flaming-X symbol. Xanadu is currently incarnated as XOC (for Xanadu Operating Company) and is owned by Autodesk, Inc., the innovative computer-graphics and computer-aided design giant. The creation of the software for Xanadu has been of legendary difficulty. The problem is one of finding efficient ways to move about RAPIDLY in data bases as large as all the words in all the books in a big library—some trillions of words. It is said that the problems are now all nearly solved, and that Xanadu may be shipping product in the next year. Of course, Xanadu has been saying this for many years!

LINKS: One of the really innovative ideas in Ted Nelson's vision of Xanadu is the notion of a LINK. One begins with a huge raw data base with the text of many books. Users move around in the data base, reading something here, comparing it to something else over there, grouping it with a related topic, looking up references mentioned in a certain passage, and so on. These user actions can be recorded by the Xanadu system as links between different groups of bytes. A user can create a whole basket of links and "publish" this as a kind of sampler, anthology, or work of criticism. One of the really nice things here is that when you quote something by publishing a link to the document, the quoted text has the entire original document attached to it. There can be no quoting out of context. And the quoted author can be paid a royalty on each use of each of his or her words! The structure of the links is based on a high-powered mathematical concept called "Tumbler Space."







This radical notion of open

hypertext publishing means both that your link can reach into the original document it points at and that FROM that original document you can find your link. So anyone can publish a footnote to any book.

The best way to look at it is as a system for delivering fragments from a document pool or delivering fragments from a pool of **virtual documents** that can share material and have links.

I started Xanadu thirty years ago thinking I would have this system in six months. So I started saving notes on the assumption that I would be able to use it as my principle writing method. So now I have two million notes hanging in fragments awaiting input. But that's my personal problem.

ZIG-ZAG HYPERGRID

My next major campaign seems to be against metaphors. I really dislike what has happened with so-called metaphors in computing. If you look at the Garbage Can and the Clipboard on the **Macintosh** — And very bad ones. The Macintosh psychology is built around cluttering

HYPERTEXT: Although Ted Nelson may have invented the notion of hypertext, he did not trademark it, and many current computer companies are presenting their own versions of hypertext—for instance, the HyperCard software which Apple now ships with every Macintosh. The idea of hypertext is that one has an electronic document in which each page might have buttons leading not to one single next page but to many possible next pages. Hypertext can include sounds, images, film clips, and computer demonstrations as well as words. Some writers have attempted creating written forms of hypertext, and a wide variety of software “stacks” for the HyperCard program are available—a recent example is the *Beyond Cyberpunk Stack*. ▲

A VIRTUAL DOCUMENT is, first of all, something which exists in computer memory rather than in print. A second feature of a virtual document is that it might in fact include no text written by its author whatsoever. It could instead be a collection of links to interesting sources. Somewhat like the *Whole Earth Catalog*, or like the book you're reading!

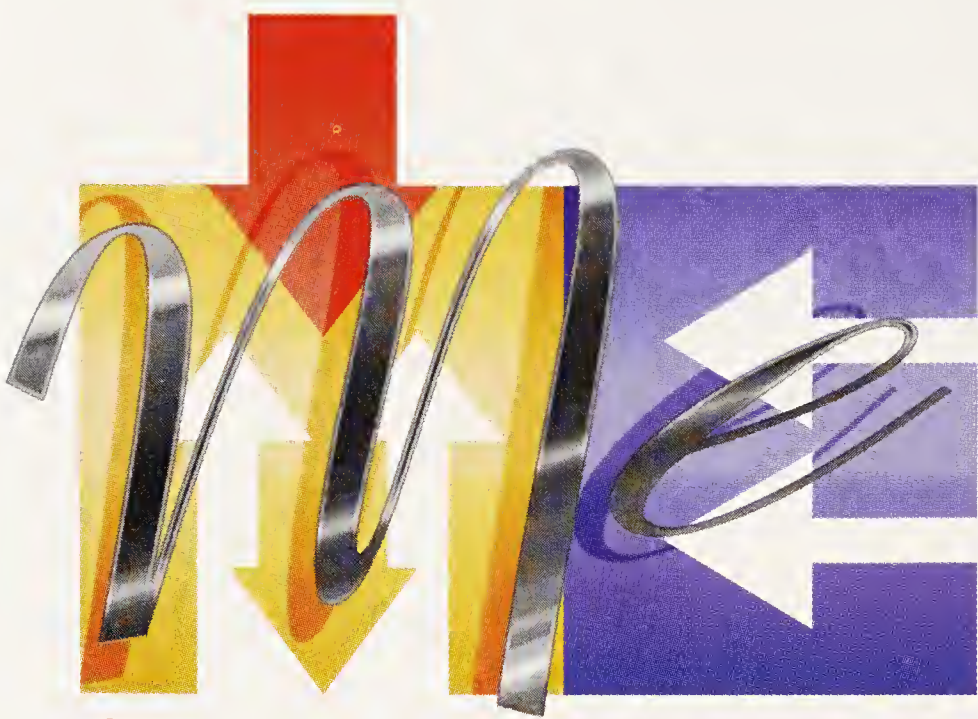
MACINTOSH: Computer people group roughly into four mutually slandering camps: PC, Macintosh, Amiga, and workstation (which splits into Sun and Silicon Graphics). One of the endearing things about Ted is that he can find something bad to say about every kind of machine.

the screen with a lot of icons that have diminished serviceability, excessive vividness, and that fill up the screen. You've got the Bird's Nest. The High-Button Shoe. The Frying Pan. The Yo-Yo. You've got to figure out what they're for—or what they meant to the person who programmed them! We'd be much better off if you didn't have an implicit comparison to start with. In my next software suite—or rather the software suite which I've been working on now for over a decade, called the Hypergrid or Zig-Zag Hypergrid—there ARE no metaphors. It is a space.

I never distinguished between technics and poetics. I've always assumed there was a continuum, and this is one of the things that has gotten me in trouble with a lot of people. I'm a monist. I refuse to acknowledge any dichotomy.

To me, software is an extension of self. In a movie, you have a virtual world that is created by many pieces under a common direction—a unified conceptual framework presenting ideas to the mind and the eye of the beholder. In software you're creating a unified conceptual idea for the mind and heart of the beholder, with interaction added. The decisions, the design decisions, are not decomposable and not delegated. **H**

A MONIST believes that All is One. One of today's computer dreams is that we really will manage to sew everything together with the electronic fibers of the Net.



WHERE THE FUCK IS MY UNICYCLE?

Ted Nelson: At one time I was under the delusion a unicycle would be a practical vehicle. It was minimalist. It seemed unenumbered. You know how the young seek to be unenumbered. I'd seen Bongo Bear in Walt Disney's *Make Mine Music* zipping around, and I figured if he can do it, so can I. I got to the point where I could carry a notebook—but never a briefcase, because it had to be rigidly held in my hand to keep the balance. But I did actually use it for transportation at Harvard. And I still have it. Where the fuck is it? I haven't seen that unicycle lately!?!...Yeah, I guess the unicycle's gone.

HOW TIMOTHY LEARY BEGAN

Timothy Leary: I began as a hopeful, optimistic sperm. Floating up Fallopian Highway 101 looking for an egg. I was conceived, as I can calculate back nine months before my birth, on the day that alcohol was prohibited in America. The first twelve years of my life I watched the grown-ups, all of them middle-class doctors, dentists, lawyers, army officers, abusing an illegal drug. So that was my beginning.

THANKS, TIM

Almost every day, someone will come up to me and say, "I really thank you for what you've done to my life." These are usually valet parkers and waiters, rather than the owners of the restaurant. When I was in prison, I'd go into a cell block and half the guys

ME: Well, we needed someplace to stick a few of the cute things some people said in *MONDO*. The New Edge is not particularly personality-oriented. You stick around about only as long as you remain interesting. They say the youth of the seventies and eighties were the "me generation." Hacker hero and Apple founder Steve Wozniak tried to convert it into the "us generation," only to be ripped off by his rock-star heroes and made to look like a fool regarding his Us Festival. The nineties may be the "it generation," as technology takes over. Personally, I like a bit of personality. The nerds feel that *MONDO* has TOO MUCH.

would say, "I owe it all to you!" I've never had someone with several million dollars come up to me and tell me how much he owes me.

OBSESSIONAL BEHAVIOR

Mark Pauline: I'll be the first to admit that there are engines that drive what I do that are very akin to the things that drive any kind of obsessional behavior. So that obsessiveness is a tool that I use. How does anybody get themselves to do anything besides sit around and smoke cigarettes and drink beer all day? Any way that you can trick yourself into doing anything is valid.

ALL IS ONE

Rudy Rucker: I've always felt touched by destiny. I feel I can achieve something in my life. My intellectual breakthrough occurred when I was about fourteen, and I suddenly realized that I'm going to die someday. My novel *The Secret Life* starts on that theme. Here you are. Aren't you having fun? You're going to die. What are you going to do about it? If you don't come to terms with your own mortality, people can take advantage of that hidden fear. The world at large exploits your fear, and you are supposed to run out and buy things to cover up the fear you have of death. Eventually I got to be less scared of death by learning to think of myself as part of a universe which is a single connected whole. This was largely due to the sixties and psychedelic experiences—feeling at one with God. **M**



**Timothy Leary
with his favorite
No. 2.
photo by
Yvette Roman**

"An idea time bomb... if something is happening here but you don't know what it is, well, they intend to tell you." —Newsweek

Mondo 2000 will introduce you to your tomorrow—and show you how to buy it today! From the creators of America's most exciting new magazine, *Mondo 2000* will help you surf the bleeding edge of the coming revolution in art, technology, media, chemistry, science, and music—the New World Disorder. Rope the Internet worm with digital outlaws... Boost your brain and body with amino chemistry... eat the quantum sandwich of nanotechnology... and immerse yourself in high-tech paganism, teledildonics, homebrew multimedia pranking, cyberpunk jockeying, and pleasure-pulse implants.

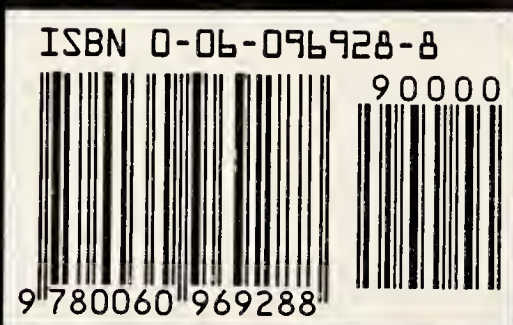
With contributions from the experts—such as William Gibson, Brian Eno, William Burroughs, Bruce Sterling, Timothy Leary, Avital Ronell, and Frank Zappa—and including more than 300 illustrations, *Mondo 2000* will explain everything you need to know about the future, and how you can see, hear, and buy much of it today.

Praise for *Mondo 2000* Magazine:

"Somewhere in the intercepts of cyberspace, science fiction, rock and roll, covert design, and holographic clothing is *Mondo 2000*, a quarterly magazine with... a heady editorial mix unmatched." —*Boston Phoenix*

"Mondo 2000... has articles which are well written, witty, and supremely self-aware, and sometimes as critical and incisive as any cultural theorist might hope to be." —*Artforum*

"The *Globe and Mail* has learned from an informed source that *Mondo 2000* is the oddest, most compulsively readable journal he's seen for a long while." —*The Globe and Mail*



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