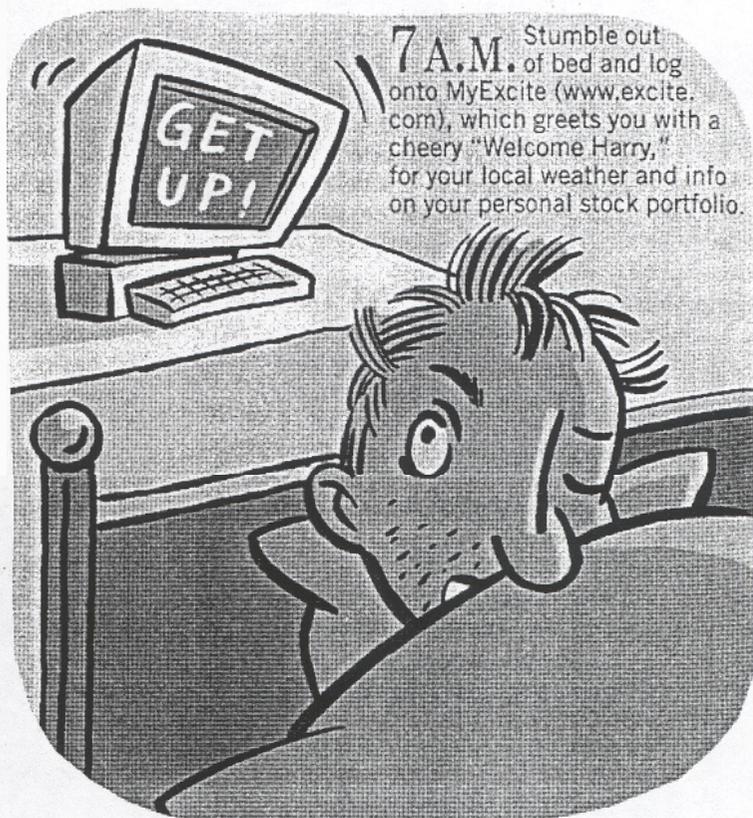


The Net is moving toward one-to-one marketing-and that will change how all companies do business

Now it's **YOUR WEB**



ILLUSTRATIONS BY CHRISTOPH NIEMANN

Soon after Jeri Capozzi logged onto the online nursery Garden Escape Inc. last winter, she was hooked. And it wasn't just because the World Wide Web site offered unusual plants, such as hyacinth beans, firecracker, and dog's tooth violet. It's because Garden Escape created a personal store just for her. Greeted by name on her personal page when she visits, Capozzi can take notes on a private online notepad, tinker with garden plans using the site's interactive design program, and get answers from the Garden Doctor. So far, the 41-year-old insurance case-worker from Lit&field, Conn., has spent \$600 at Garden Escape and has no plans to shop at any other nursery with service that personal, she says, "I probably will never leave it."

Personal service on the Internet? Isn't that an oxymoron? For most Web surfers, the Net has been just another aloof mass medium like television, radio, and newspapers,

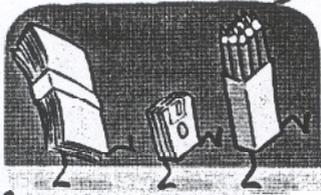
dishing up a morass of information that you then have to sift through. But as consumers such as Capozzi are discovering, the Net is finally beginning to cast off the mistaken identity of its youth and deliver on its original promise—the ability to tailor itself to every one of its 100 million users.

Don't think "mass." Think "me." Like no other mass medium or marketplace, the Net offers merchants the ability to communicate instantly with each one of their customers. The Net also lets those customers talk back, so that they can demand unique products and customized services. Until now, few Web-site operators have taken full advantage of this intimate link, but that's changing. According to a survey of 25 top online merchants by New York market researcher Jupiter Communications, 40% say they have begun to offer personalized features, with 93% saying they will within a year.

If personalization pops up all over the Net, it could usher in a new era in electronic commerce—one that threatens to shake the foundations of conventional mass marketing and mass production. Indeed, the real kick from the Net's personal touch will go far beyond marketing and sales. Ultimately, it could transform not just merchants' contact with customers but all their operations, from how they research and design products to how they're manufactured.

CHANGING FOCUS. For most of this century, mass marketing and production have held sway, thanks to both the exploding population and the incredible production efficiencies of the Industrial Age. It just didn't make economic sense to provide products and services customized to each buyer. And without a cost-effective way to track the purchases and preferences of individuals, marketers had to resort to

9 A.M. In the office, you're running low on floppy disks and printer paper. Log into your personal account on the company intranet with Office Depot (www.officedepot.com), click a few boxes, and the stuff's on its way.



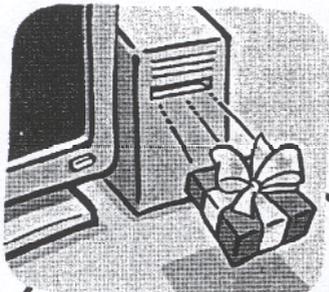
10 A.M. Calling up your department's internet proxy, you print out market research reports on rivals you had asked a software "agent" to search for.



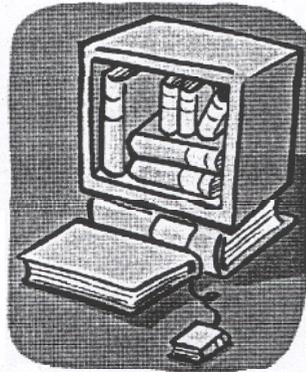
11 A.M. American Airlines (www.aa.com) just sent an E-mail with a special fare on your usual business route next Week.



2 P.M. An E-mail from Amazon.com (www.amazon.com) tells you the John Grisham book you asked to be alerted about is out. You hit the hyperlink, land at Amazon.com, and with one more click, the book is on its way to you.



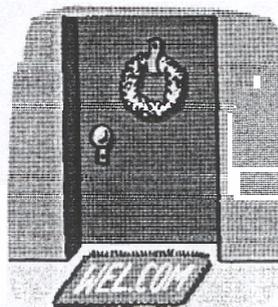
3:30 P.M. An alert on your customized contact service at PlanetAll (www.planetall.com) says your dad's birthday is next week. Log onto the comparison shopping service MySimon (www.mysimon.com), which sends out a personal "bot" to scour the Net for the lowest price on the Sinatra boxed set.



12 P.M. While you're at the deli, your cell phone beeps. The digital readout says some stocks you own hit predetermined sell prices. Tap in your sell orders, and they go out instantly over the Net to your broker.



7:30 P.M. The kids want a dog. Surf over Ralston-Purina's breed finder www.purina.com, fill out the questionnaire on your lifestyle and the kinds of dogs you like, and the site provides a ranked list. Yikes-a St. Bernard's at the top.



9 P.M. You'll need a bigger house to fit that St. Bernard. Log onto Coldwell Banker's Personal Retriever homebuying site and peruse your personal portfolio of homes that meet your criteria.

5:30 P.M. While listening to a supplier drone on about widgets, you surf Garden Escape (www.garden.com), check out landscaping plans you did online for your garden, click the Plant Finder for what will grow in that sunny border, and order the suggested plants.



10 P.M. Time to relax. At Imagine Radio (www.imagine-radio.com), click on "Harry's Jazz Station," a Web audio feed programmed with your favorite artists, and let Miles Davis blow your tensions away.



inexact measures, such as demographics, to sell their wares.

Now, the Net—and its ability to reach the masses individually yet economically—may mark a historic swing back to one-to-one marketing. That could change merchants' focus from gathering a mass of customers for their products to getting products that fit individual customer demands. "The technology has caught up to the number of people in the world, and we've come full-circle," says Steve Kanzler, chief executive of LikeMinds Inc., a personalization technology company with the slogan: "Every individual is a market."

Early signs show personalization has a huge payoff. Jupiter reports that customization at 25 consumer E-commerce sites boosted new customers by 47% in the first year and revenues by 52%. Even at a cost of \$50,000 to \$3 million for the personalization software, along with computers to store the customer profiles, personalization generally pays for itself within a year.

Music retailer cnow Inc. already is signing its virtues. On Sept. 16, it launched My cnow, which lets customers get a page designed just for them with music suggestions based on their stated preferences, past purchases, and ratings on artists and CDs. cnow has seen an immediate benefit in consumer interest: The number of pages viewed on one of

its features, called Wish List"—which appears on the customized pages and lets shoppers name CDs they may buy later—jumped 200% almost immediately "It really is a music store for each of our 600,000-plus customers," says Jason Olim, cnow's CEO. "At the end of the day, it will mean more revenues."

Only if cybemauts are of the same mind as merchants, who think the upside of personalization outweighs the downside. So far, the answer to that is decidedly mixed. Because customizing requires people to cough up personal information and fill out sometimes lengthy forms, only a small fraction of Netizens have done so.

Worse, there are rising concerns about privacy, which could prove the Achilles' heel for personalization. Too often, sites step over the fine line between being personal and being nosy. And many Web surfers chafe at the very underpinnings of personalization: To build customer profiles, Web merchants often monitor an electronic trail that reveals all sorts of things about users—say, that you're a 28-year-old female Los Angeles office worker who likes vegetarian food, Jackie Chan movies, and mystery novels. "Personalization to many Web sites means, 'How can I sell you out to an advertiser so I can charge more for ads?'" says Steve Tomlin, CEO of PersonaLogic Inc. of San Diego, which makes personalization software.

Alarmed, government officials are threatening federal regulation that could severely limit the use of personal details merchants so badly need to offer tailored products. One encouraging sign: Most E-merchants seem increasingly aware that they have to be upfront with customers, and they are devising ways for cybemauts to surf incognito (see box, "Fending Off Those Pesky Snoops").

SNEAKY PEEPERS. Even if fears of sneaky peepers are assuaged, personalization faces yet another hurdle. For all its promise, it still is crude and cumbersome. Personal-recommendation technology, which uses complex mathematical formulas to match people's likely interests, has a long way to go before it lives up to your most trusted critic's suggestions. Buy a gift for someone whose tastes you abhor, for instance, and your future customized recommendations may never recover. And separate databases on your habits aren't always matched up: Amazon.com, for instance sometimes suggests books you have already bought there (see box, "Some Matches Are Not Exactly Made in Heaven").

Still, those who have taken the plunge seem pleased. Portal site Excite Inc. says people who use personalization come back five times as often as others and view double the number of pages. They also tend to stick around when they come. "It

NET PERSONALIZATION: A PRIMER

WHAT IT IS:

Personalization is what merchants and publishers do to tailor a Web site or E-mail to a consumer based on past behavior, tastes shared with others, age, or location. Surfers either give the data to the site operator, or it can be gleaned by their movements or purchases on the site. Customization involves the active choices that Web site visitors make to specify which news, products, or other features they want to see regularly. The goal for merchants: One-to-one marketing.

HOW YOU USE IT:

Shoppers can use a program called an intelligent agent—also known as a bot—that automatically scours the Net for information, such as prices on products. For customer service, a few Web sites feature a humanlike chatterbot, an intelligent agent that can answer questions in a conversational style. Many retail sites offer customers a recommendation service, which uses complex mathematical formulas to suggest products that match customer preferences.

THE TECHNOLOGY:

Collaborative filtering compares customers' purchase history, stated preferences, or clickstream—where they go on a site—with those of other buyers to determine what they're likely to buy next. Another matching technique is neural networks—sets of programs and data that mimic the human brain to recognize hidden patterns in complex data, such as correlations between buyers of seemingly unrelated products.

has kind of contained my surfing," says Hollywood producer Chris J. Bender, who has his stocks, movie news, and local weather on his customized MyExcite page.

How does personalization work? Buy a book at on-line retailer Amazon.com, and the next time you visit, the opening screen will welcome you back by name. Using recommendation software that analyzes your previous purchases, plus any ratings you have made on other books, it will suggest several new books you might like. And it will remember your personal information so you can buy a book with a single mouse click.

Or surf over to portals Yahoo! Inc. and Excite. Click on lists of what you want to see and do on the Net, and type in some personal information. Viola! Your MyYahoo! or MyExcite page displays your name and personal E-mail box, news you request, sports stats, the weather, and an alert about your spouse's birthday next week.

It's happening at work, too, where businesses are getting just as up-close with each other online. This month, Office Depot Inc. began offering small-business buyers personalized online catalogs. And new software from Trilogy Development Group Inc. in Austin soon will enable these customers to craft unique Office Depot catalogs for each of their employees-based on their buying authority-and created instantly on demand.

There's a lot more to come. This fall, many of the best-known consumer sites, such as computer-seller Cyberian Outpost and N2K Inc.'s Music Boulevard, will launch personalized features to help kick off the holiday selling season. N2K, in a trial run of personalization this year, found that the recommendations prompted people to buy CDs 10% to 30% of the time—a huge leap over the average 2% to 4% rate on the rest of the site.

IN THE RED. Cybermerchants need just that kind of boost. After paying millions of dollars for real estate on

portals and other high-traffic sites, few E-merchants are actually making money. Some big ones, such as Amazon.com, are expected to lose money until well after 2000. To earn profits, they have to get customers to buy not just once, but over and over.

For that, a personalized Web experience is critical. To keep coming back—or even to hazard an online purchase for the first time—customers need to feel they're getting something no one else in the brick-and-mortar world can offer. That's what Amazon.com is trying to do. By offering personal recommendations, which can change after every purchase and every visit, it hopes to get people to keep coming back. It worked for Christopher Mills, a market manager for a Torrance (Calif.) software company. He keeps buying at Amazon because, he says, "it has a real personalized touch." Indeed, repeat buyers accounted for more than 60% of Amazon's \$203 million in sales in the first half of 1998.

Brand-building is just as important as sales for many merchants. They're finding that personalizing attracts more people and keeps them on their sites longer. Ralston-Purina Co., for instance, has a Breed Selector on its purina.com site that guides people through a series of questions on their lifestyle and what canine qualities they prize. It then spits out a ranked list of dogs that fit their personal preferences. Since the feature was installed in June, the num-

ber of visitors has jumped 25%, and they stay twice as long—exposing them to more Purina marketing messages, says Mark S. Whitzling, director of Purina Interactive Group.

Loyal users are just as critical for merchants. They can use the data that members have revealed to help advertisers target the most likely buyers—and charge more for the ads. Right now, an untargeted Web site banner ad averages about \$17 per thousand people reached—less than half the rate of consumer magazines. Kent Godfrey, CEO of the San Francisco Web marketing technology firm Andromedia Inc., thinks ad-driven sites need some ads to top \$300 per thousand viewers. "To do that, you have target on an individual basis," says Godfrey.

It will be an uphill struggle—and not because it can't be done technically. So far, few advertisers target ads online with any more precision that they do in conventional media because segmenting too finely may produce scant customers. "We can show ads to golfers in Kentucky with two kids," says Charles Ardai, president of Juno Online Services, which offers free Net access to people willing to accept ads. "But is it really worth your while doing a lot of work and analysis to target three people?"

Even so, early trials show some promise. Kraft Foods, Bristol-Myers Squibb, Kellogg, and others, for instance, saw an average 27% increase in sales when they ran a targeted banner ad on the grocery-shopping

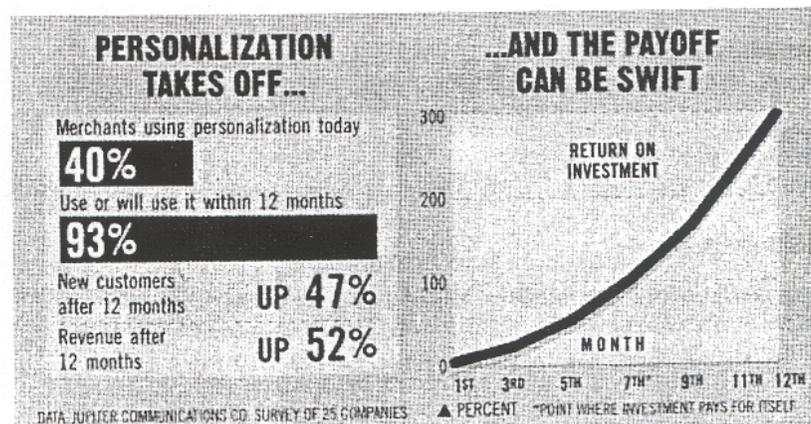


CHART BY JEAN WISENBAUGH

FENDING OFF THOSE PESKY SNOOPS

You're 55 years old, you make \$50,000 a year, and you've been surfing the Web for athletic-shoe supports. Suddenly, Amazon.com starts urging you to buy safe-sport guides for aging joggers. Even more irksome, CDnow Inc. is recommending you buy '60s oldies by such artists as Iron Butterfly. Jeez. It's bad enough CDnow thinks you're a heavy metal fan. Do you really want these sites to know your salary, your age, and all about your fallen arches?

The trouble is, most of them already do. Consider "cookies," the deceptively sweet name for software that's downloaded into your PC's hard drive, usually without your knowledge. Sent by online merchants, advertisers, and Internet services, they quietly record your Web habits. Each time you visit a site, cookies are uploaded for review by the people who put them there, so they can pitch you products you may find too good to pass up.

Some cookies simply track what you read and buy on a single Web site. But more powerful software, called "tracking cookies," follow you everywhere. These hard-drive supersnoops, often used by advertisers, let marketers combine data from the cookie on your hard drive with the personal information you volunteer when filling out registration forms. Armed with such profiles, cybersalesmen may be able to get at your credit-rating, salary, and lifestyle.

BLOCKERS. What to do? You can block cookies entirely, using the preference settings in the pull-down menus of the two leading browsers, Netscape Navigator and Microsoft Internet Explorer. Or you can curb their snooping. With Netscape Navigator 4.0, you can set preferences so that your browser accepts only cookies that get sent back to the "originating server"—no more tracking

cookies. The result: E-merchants and services are kept from tracing anything you do beyond their site. And there are other ways: Software, such



TAKE CONTROL

JUST SAY NO Browsers by Netscape and Microsoft let you turn off cookies, data files that track your movements online and are placed on your hard drive when you first visit a site. But much of the Web then is rendered off-limits—and you won't get customized information.

PICK AND CHOOSE COOKIES Trust Labels, a free browser plug-in from Engage Technologies, Inc., filters out cookies that might identify who you are or where you live, so you can personalize sites yet remain anonymous. Netscape may put the software in its next browser.

CREATE YOUR OWN PROFILE Software makers are working jointly on a much broader filter called P3P, which would let you tell your browser how much data to divulge.

as Kookaburra Software's Cookie Pal (\$15), lets you list sites from which you'll accept cookies. And for \$60 a year, Netizens can subscribe to The Anonymizer, a San Diego-based service that lets you surf the Web and send E-mail anonymously.

Some Net marketers argue that as long as your real name, address, and phone numbers are protected, it's impossible to overly intrude. "We don't need to know who a person is to customize the experience," says Dan Jaye, chief technology officer of Engage Technologies Inc., which sells anonymous user profiles to online marketers. Over the past five months, Engage has amassed a database of 38 million user profiles, which it sells to advertisers and E-retailers. Jaye says these "can't be used to track you down. If the government subpoenaed our database, we couldn't tell them who you are."

For those still worried, Engage is developing "trust labels," which reject any cookie that marketers or advertisers use to expose a Web surfer's real identity. Engage demonstrated the tool to the Commerce Dept. in June, and Netscape may add it to the next version of its browser, due late this year.

But the most ambitious privacy effort so far is called the Platform for Privacy Preferences (P3P). Software companies are working on a P3P standard that would let cybernauts choose how much personal information to disclose. Under the plan, cybernauts—by setting their browser preferences—may choose to block out everything or agree to disclose only some data, such as their zip code and gender. Progress is slow, however, so consumers may have to wait a while for relief. Until then, the best advice might come from your mom: Don't accept cookies from strangers.

By Paul C. Judge in Boston

CHRISTOPH NIEMANN

service, Peapod Inc. Even more impressive, San Francisco electronic coupon company Planet U found in a trial at Dick's Supermarkets in Wisconsin and Illinois that Web coupons targeted to shoppers' preferences were redeemed 20% of the

time—more than 10 times conventional coupons.

For many earthly merchants, the Net's ability to personalize products and services with pinpoint precision adds up to a bowling ball aimed at the very foundations of modem-day

commerce. It heralds wrenching change for how manufacturers, distributors, and retailers will be organized and run. Today, most companies organize themselves by products: Product managers are the basic drivers for marketing. In the future,

SOME MATCHES ARE NOT **EXACTLY** MADE IN HEAVEN

Our reporter finds customizable Web sites are fun, but also a pain in the neck

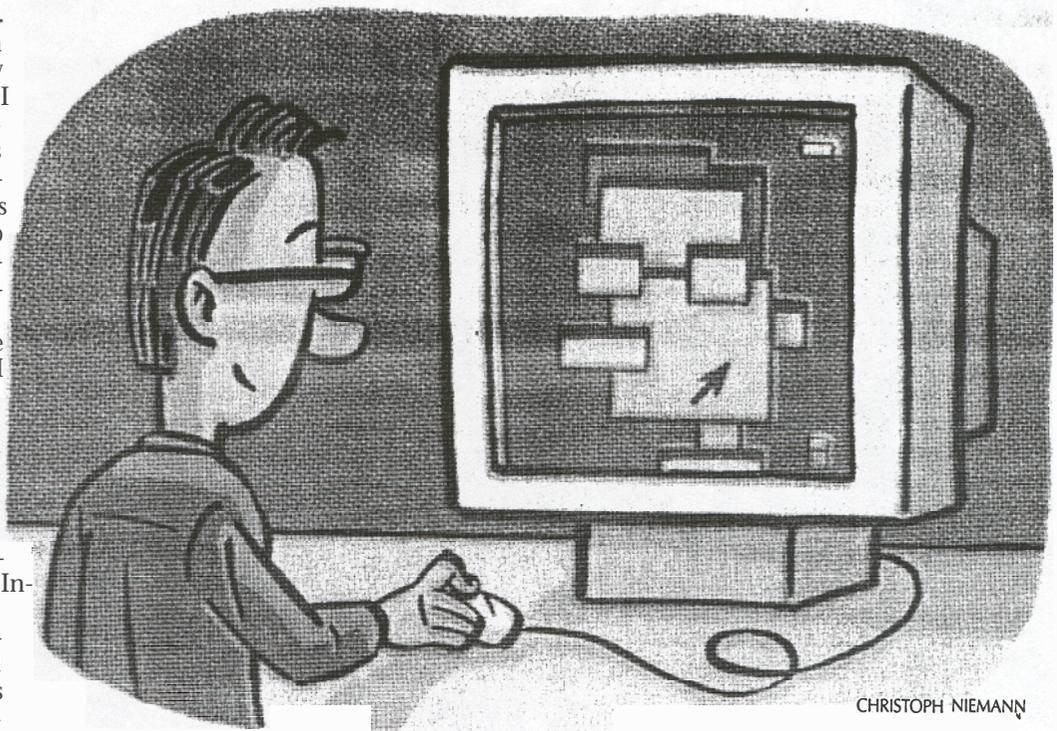
I admit it. I'm a bit of a privacy freak. I memorize a fake phone number for nosy video-rental clerks. And I don't participate in super-market rewards programs for fear of revealing my personal data (say, my weakness for Cheez-Its). So even if Web sites promise me personalized news or product recommendations, I often hesitate, or at least fudge data on the registration forms—O.K., so I lie. But to keep our readers informed (and to keep my job), I have sacrificed my privacy to check out customizable sites.

I began my search for My Web where just about everybody else does—at the Internet portals. Since last year, Yahoo!, Excite, Infoseek, Lycos, and others have offered ways to customize their sites in hopes of making you forget they were just supposed to be doorways to everywhere else. I tried MyYahoo first and, to my relief, it didn't ask for much personal info. But I got a cramp from spending a couple of hours scrolling through screen after screen, picking which news, sports scores, stock prices, and other features I want to see on my personal start page.

FIRST-NAME BASIS. An easier way comes from Excite. Instead of forcing you to fill out a form, it asks that you type in your zip code for local weather, your birth date for your horoscope, and so on. Before you know it (that's the idea), you build up a profile that allows Excite to tailor material for you. You still have to make some choices to personalize areas such as news and stocks. But at least MyExcite has manners: It greets me by my name—not "robh56," like MyYahoo.

But I really came here to buy stuff on the company dime. Uh, I mean, I want to find out how well the so-called recommendation services work. Merchants like online bookseller Amazon.com use software that logs my interests and purchases and, using complex mathematical formulas to match them to other customers' habits, spits out suggestions for products people with similar tastes have bought. I've ordered only a few books from Amazon, on cooking, the Internet, and Jack Kerouac. So when I ask it for recommendations, I can't blame it for suggesting more books on the Net and cooking (but nothing, oddly, on Beat Generation writers).

To refine my profile, I drive into Amazon's ratings section and, on countless pages of book lists, click either "I own it" or "Not for me" under each book. There's seemingly no end, so after 20 pages of this, I stop, rub my eyes, and ask for recommendations. In the literature and fiction category, the first six suggestions are by John Steinbeck, many of whose



CHRISTOPH NIEMANN

HURRY UP AND WAIT

Personalized Web sites can test your patience. You'll spend a couple hours clicking and scrolling, for example, with MyYahoo's page set up

books I told Amazon ^{to}. Not exactly rocket science.

The nonfiction category brings up more Net and cooking fare, plus *Nightwork: Sexuality, Pleasure, and Corporate Masculinity in a Tokyo Hostess Club*.

Whoa! Where did

that come from? Several intriguing choices do pop up, one of which I buy (*Silicon Snake Oil*, by Clifford Stoll). But I bet the service would be more accurate if I could just type in some favorite books.

Still, Amazon does better than the competition. At barnesandnoble.com, the personal recommendation area is nowhere to be found on the site's first page. No wonder. Once I find it, I work through a dozen screens but find mostly contemporary fiction and only a few books I've read. Sure, make me feel like a Philistine. Finally, a black screen appears. What now? I go back and try the "Get recommendations" button—and it asks me again to rate all those books. Think again.

JOHN DENVER? I hope to have better luck with compact disks. My CDnow almost blows it by recommending a John Denver CD immediately after I register my music preferences. I suppose it couldn't know I hate John Denver, but it does know I chose neither country nor folk as a preference. However, after energetically clicking "not for me" on that one and clicking on others I did like—I also could type in

(continued)

my favorite artists and rate records I already own—the suggestions quickly improved. Otis Redding? Bingo.

Emboldened, I move on to movies. Video merchants such as cinemax.com and bigstar.com offer a few good suggestions but also some head-scratchers: C'mon, does *anyone* actually like the golf farce *Happy Gilmore*? That's why Reel.com Inc. is so refreshing. Instead of hoping that buyers will rate enough movies to build up an adequate database, a staff of 20 real people rates and matches movies before plugging them into a recommendation program. I ask for movies similar to *Pulp Fiction*, and "close" matches spit out *Get Shorty* and *Reservoir Dogs*. Nice. But the "creative" matches were even better: *Fargo*, *Trainspotting*, and *Blue Velvet* (though after watching all those in succession, I might welcome *Happy Gilmore*).

Now, I'm ready for the big kahuna—buying a house. Coldwell Banker's Personal Retriever makes a decent attempt. Clicking through a series of choices on the type of house I want, the price range, the location, and the like, I create my personal portfolio of house listings in the locales I'm interested in. Hmmmm—only four in my price range? (How about a raise, boss?) Once I find a listing I like, I click on a calculator to figure what my mortgage would be (ouch!) and get some information on local schools. I can save the listings and get updates via E-mail. It's handy but limited to Coldwell Banker listings, and it's not all that tailored to my financial situation.

I'll have better luck once I have the house and can get started on a garden. Garden Escape's garden.com offers a raft of appealing personalized features, starting with a home page tailored to my climate (which it knows from the zip code obtained during a short registration). I also can store orders for plants and tools in a "wheelbarrow" for later purchase, jot notes about plants in an online notebook, and launch a Garden Planner program that lets me plug in plants on a grid representing my garden. A Garden Doctor even answers questions personally

CHATTERBOTS. For pure fun, though, my favorite customizable site is Imagine Radio. It lets me create my own online radio station on the site, which can be heard by anyone through a PC using Real Networks Inc.'s latest player. Clicking away on a long, though limited, list of artists (no classical, for example), I create my own personal station with just the music I like. No Yanni or Michael Bolton for me. Curious? Check out "Ra-

dio Rob": Click on the site's "personal" music button, and it's in the "Carnival" section.

Although these services are supposed to make the Web feel more personal, almost none of it feels as if there's someone at the other end of the wire. For that, I try a prototype service from Big Science Co.—a so-called **chatterbot**, or artificial intelligence character. One named Andrette is being tested as a possible cyberconciierge at Access Atlanta, a Cox Interactive Media city guide. Here's a sample (typed) conversation:

Andrette: "Tell me what you are looking for."

Me: "I'm looking for love."

Andrette: "Say that again, please?"

Me: "What are the best bars in town?"

Andrette: "To discover some great restaurants, click here."

Me: "O.K., how about music clubs?"

Andrette: "Click here for the Access Atlanta music calendar."

Not bad, I suppose, but an entertainment listings index might work better.

What I initially feared most from all these personalization efforts was a deluge of junk E-mail. So far, that hasn't been a problem. I get more spam from two posts to a single Usenet group a year ago than from all my personalized Web adventures. On the other hand, the E-mail pitches I have received don't seem to make use of the personal information I've divulged. American Airlines Inc., whose frequent-flier program I signed up for online, has sent me several E-mails on last-minute Net SAAVER Fares and hotel deals—none targeted to my home airport, let alone routes I specified.

Clearly, Web personalization has a long way to go. Navigating the Web's vast resources still required a steady mouse hand, a big browser bookmark file, and a lot of patience. Oh, and I almost forgot, a good memory. I've created so many sign-on names and passwords for security on various sites that I can't remember them all. So I have to write them down—the worst security breach of all. Even so, my personal Web already is useful. I do get things done faster and sometimes discover things I didn't know I wanted—to the detriment of my credit-card balance. I tend to stick around some sites more consistently and even feel a little warm and fuzzy toward a few. Your results may vary. But then, that's the whole idea.

By Robert D. Hof in San Mateo, Calif.

Getting Personal

Like any new technology, the software behind personalization of Web sites can have some rough edges when it comes to getting your personal page set up or getting back what you want. Our review surveyed a few sites to see whether the experience was a pleasure, a pain, or just so-so.

WEBSITE	RATING
AMAZON.COM	1
BARNESANDNOBLE.COM	2
GARDEN.COM	3
IMAGINERADIO.COM	4
MY CDNOW (cdnow.com)	5
MYEXCITE (excite.com)	6
MYIAHOO! (yahoo.com)	7
PERSONAL RETRIEVER (Coldwellbanker.com)	8
REEL.COM	9

cover things I didn't know I wanted—to the detriment of my credit-card balance. I tend to stick around some sites more consistently and even feel a little warm and fuzzy toward a few. Your results may vary. But then, that's the whole idea.

companies instead will have customer managers, predicts Martha Rogers, co-author of *The One to One Future: Building Relationships One Customer at a Time* and a professor at Duke University. Their job: Make each customer as profitable as pos-

sible by crafting products and services to individual needs.

HALLOWED GROUND. The upshot is that actual customer demand—not forecasts—will drive production. Dell Computer Corp., for instance, has created some 1,500

customized home pages for its best customers so they get direct access to corporate-specified personal computers, negotiated discounts, and records of orders and payments. This is a big reason Dell's PC unit sales are growing over 70% a year, light-

years ahead of the industry average of 11%.

The Web even allows customers to directly influence the most hallowed province of corporatedom: product research and design. Consider the case of Sapien Health Network. The site offers personalized information for some 115,000 sufferers of 20 different diseases, from breast cancer to hepatitis C. After filling out an extensive questionnaire on their unique conditions, each patient gets a personal "bookshelf" full of symptoms, treatments, and the like, specifically related to their unique ailments.

Originally Sapien charged subscription fees—but patients balked. So now, Sapien makes money from collecting patient data anonymously, compiling it into population studies, and selling it to drug companies. It also conducts focus groups and recruits willing patients into clinical trials of new treatments—often with unheard-of targeting such as people who are incontinent and wet one pad a day. Asks Sapien product marketing director Michael S. Noel: "Where are you going to find these people in the real world?"

Ultimately these ever-widening electronic links to the customer will

lead to the Holy Grail for manufacturers and service providers: mass customization of products. For an early example, look to **artuframe.com**. The art and framing site based in Lake Forest, Ill., started offering 1 billion possible combinations of posters and frames last May. Using recommendation software from Net Perceptions Inc. in Minneapolis, customers narrow down the vast choices—eventually coming up with their unique product. "We're giving total control to the customer," says artuframe.com President William A. Lederer. He expects \$3 million in sales this year.

The Net's ability to reach millions instantly and individually is even creating products that couldn't be sold economically before. American Airlines Inc. recently beefed up its frequent-flyer member site using one-to-one marketing software from **BroadVision** Inc. Members can streamline their booking process by creating a profile of their home airport, usual routes, seating and meal preferences, and the like for themselves and their families. With these profiles and a way to reach members instantly, American can offer, say, parents whose children's school vacations start in a few

weeks discounts on flights to **Disney World**. Says John R. Samuel, managing director of interactive marketing: "We're now able to create a product that couldn't have existed before."

As the Net's ability to personalize products and services spreads, terra firma businesses will have to follow suit. How long will Compaq Computer **Corp.**'s customers, for instance, remain willing to wait longer for shipments and get less-customized PCs than competitors buying from Dell? "Consumers are going to have the big stick," says Eileen Hicken Gittens, president of Personify Inc., a San Francisco maker of Web customer-analysis software.

Does all this mean the end of mass marketing? Of course not. Many merchants aren't even ready to go online in a big way let alone market one-to-one. But for all the perils of personalization, the real danger is pretending the Net is just another marketing channel. After all, why do you think they call 'em *customers*?

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