COMING SOON TO A SCREEN NEAR YOU: THE ELECTRONIC FRONTIER

While the mainstream pc world was at PC Expo and following IBM's courtships of Lotus and Apple, smaller groups convened to look at the more distant future. In particular, Computer Professionals for Social Responsibility and the Electronic Frontier Foundation were assessing the future of the electronic infrastructure under the banner "Civilizing Cyberspace: Minding the Matrix," while the Global Business Network gathered a group of clients (MCA/Universal, ABC, BellSouth, the Leo Burnett ad agency, Pillsbury) to discuss "The Future of Electronic Advertising."

Same topic, different concerns: Either side might have learned a lot more by going to the other's meeting. But would they have been ready to hear it? The future is a strange place. As GBN's Jay Ogilvy observes, the scenario considered most implausible is frequently the one that ultimately unfolds.

A scenario, of course, is not so much a prediction as a piece of science fiction. Take a world model, add a plausible premise, and build a new, consistent world model around it. The goal is not to be right in every respect, but to provoke discussion that may in fact change the very future one is assessing. (The Art of the Long View, a book by GBN founder Peter Schwartz, describes the process in detail.)

Herewith our scenario, as developed over a number of plane rides between meetings, punctuated by electronic and electric disturbances -- phone failures and thunderstorms:

Our world model includes widespread use of high-bandwidth electronic communications over what we call the "global network," actually a collection of interconnected networks. Each home has access to a wide variety of electronic media, both for receiving mostly canned programming -- entertainment and information -- and for two-way communication with other people, businesses and agents. This happens through some combination of the government's National Research and Education Network, government subsidies, and a vigorous competitive market that wastes a lot of energy but ends up providing the best possible system to the few who care and will pay for it and an adequate system for the rest of us. (See page 9.)

The government does play a vital role in the premise underlying our scenario. It passes legislation clarifying existing rights to privacy and

GO NETWARD, YOUNG FOLKS!
to personal property implicit in the Constitution, and thereby establishes the right and ability of people to own and transfer data about themselves.

That is, the right to privacy is recognized as an economic right: Juan can sell the right to one-time use of his name and address and any transactions he may make to Alice, who can then sell it (for one-time use only, after which it expires) to a third party. Typically, the user of the name doesn’t actually "see" or possess the name; Alice uses it on his behalf, in a mailing, a phone call or some other communication. Like software, this information needs a specific license to be reused (in any form) beyond the terms of the original contract.

The other party to the original transaction can use the record only in connection with that particular transaction -- for billing, contract management and the like. Can he use it to check up on customer satisfaction? Sure. So what about for follow-on sales? Hmm. That's a sticky question, but in the presumption-of-privacy environment we hope to see created, it might be resolved in the customer's favor.

What happens to privacy in a world where economics rules? Economics can provide incentives for protection of privacy without government "assistance" beyond clearly stated law. Privacy becomes the vested interest not only of individual data owners but of data banks dedicated to the maintenance and licensing of the data on behalf of the data's owners. Protection of privacy does cost money. You can't legislate that fact away, but now people can decide how much privacy they want, and from whom.

ECONOMIC BEINGS

This simple assumption -- that people own and can sell their own personal data -- means that now a substantial business sector will have a vested interest in protecting each person's privacy and in maintaining the value and integrity of that data. The result is certainly a shift from the civility, discretion and good manners that used to govern the world. We have to move forward, letting the market pick the way between stifling restrictions on information flow and widespread surveillance by government or business. We're already in another world: recorded telephone solicitations, "We know who you are and you're going to love our product" letters, car phones, personal faxes, automatic toll collection from marked cars, and other capabilities of modern technology. Let's take another look at that world before exploring the legislated-privacy scenario on page 11.

The theory

The Industrial Revolution took labor out of the home and off the farm and turned it into an economic entity. People were paid to produce goods for others, and others paid for the goods thus produced. Of course the catalysts -- the owners of farms and capital -- made out the best. But each individual retained the right to his own labor, at least in the market economy, and the right to decide how to apply it and how hard or long to work.

Sure, these rights have been abridged and limited in practice, but their existence is a tenet of the free market. Laborers could also enter into con-
tracts to sell their labor -- restricting their freedom in return for secur-
ity and stability. Of course, in the real world, the ability to exercise
these powers varies, but education and communication have in general ex-
panded individuals' freedom to dispose of their time as they see fit. One
role of the global network will certainly be to keep people apprised of
their rights (even to excess, as when lawyers encourage people to sue).

The service economy took this a step further, and made economic goods out of
service as well as "productive" labor. People now pay to have their food
cooked and served outside their homes; they take their children to day-care
centers; they hire personal trainers; and so forth. None of this is totally
new, but it's now happening to an unprecedented degree. This is the commer-
cialization of individuals' role as producers of goods and now services.

Goods are abundant; good consumers are hard to find

Now, in a word of relative abundance of goods and shortage of demand (in the
affluent U.S.; the needy markets of Eastern Europe and other developing
areas and the dysfunctional U.S. underclass are another story), we are about
to commercialize people's role as consumers -- both in business and at home.
(Does your employer own your data, as some claim to own frequent flyer
miles?) Although some people find the notion distasteful, the story is the
trading of rights and intellectual property and so forth -- economics. In-
dividuals now have economic power not just as labor, but as consumers;
that's why producers spend so much money on marketing which would be un-
necessary in a society of scarcity, where almost anything produced is eager-
ly consumed. Traditionally, producers got the profit generated by the pro-
duction of goods (i.e. the surplus of what the consumer pays over what the
provider spends to make and deliver the goods -- including the costs of
finding the consumer). But consumers now have more options than they can
realize and limited attention to explore those options. So if consumers
help producers to find them, why shouldn't they get a share of the profits?

MEDIA MAKEOVER: FROM MASS MARKETING TO CUSTOM MARKETING

The background to this shift in economic power is a transformation in the
mass media. We've had too many goods (by world standards) for some time;
now we also have a surplus of media. The mass media grew up along with mass
production, selling everything from cars and whiskey to ketchup and diapers.
Brand names were created and reinforced by the mass media, many of them per-
sisting for generations: Fords, Campbell's Soup, Heinz Ketchup....

But now the mass media are suffering from lowered barriers to entry and
fragmenting with the arrival of cable tv and videos, special-interest publi-
cations and desktop publishing. Mass media are losing the ability to create
new mass brands. Overall television viewing has been flat over the last
decade, but the networks' share is down to below 70 percent from over 90
percent; cable tv has most of the rest. Meanwhile, people are spending more
time with VCRs, timeshifting programs and deleting the commercials; they are
taking more control over what they see. And in a novel extension of do-it-
yourself, they are creating their own porn videos (and, as the New York
Times recently reported, surgery videos and child-delivery videos). Just as
porn led the way for both cable and video cassettes, so may it also lead the
way for home programming, where individuals take on the role of producers of
entertainment as well as economic information.
The Electronic Frontier Foundation is probably best -- but incorrectly -- known as "Mitch Kapor's organization to defend computer hackers." In fact, the basic message of the Foundation is, "There's a new world coming. Let's make sure it has rules we can live with." These rules will establish the rights and also the responsibilities of the users of the electronic infrastructure -- which means, eventually, all of us.

The Foundation's most visible efforts, yes, involve the defense of people charged with various forms of electronic trespass and damage. This is not to say that there's no such thing as illegal hacking, but that not all hacking is illegal. Many hackers' rights are abridged when they are arrested by government agents who don't understand how a computer works. There's a certain fear of the unknown that makes people suspect the worst of a supposed "computer criminal." Searches have been overly broad, and charges ridiculously overstated. Moreover, innocent bystanders are hurt too, when bulletin boards are closed down and their means of communication with each other is disrupted by law-enforcement agencies.

Sentences are also unduly harsh: Consider the proposed prohibition on Robert Riggs' use of a computer after his release from prison. The computer is not a magic, deadly instrument but rather something closer to a telephone. Many criminals plan their crimes by telephone or even commit telephone fraud, but they don't get barred from telephone usage thereafter. Says EFF: "Such restrictions tend to promote the notion that computers are inherently dangerous...[and that] access [to them] falls properly within the scope of government action." (Details from the EFF.)

The EFF also advocates government funding for the National Research and Education Network, and passage of bills to do so currently in the Senate and House. That doesn't mean that NREN would be the only thing going, but it would be a spur to and resource for private efforts. Certainly such a network should exist, but what's the best way to get it done? Should access be subsidized for the poor or distant, as it was for telephone service and still is for postal service (without much harm to Federal Express, among others)? Should the subsidies be direct, or should they go to users, or should they be achieved through regulation?

Perhaps these questions don't have absolute answers, just as the telephone business has evolved through a variety of forms (not always gracefully, to be sure). Perhaps we should start with a subsidized network that ultimately will pay its way. Although the EFF has positions on these issues, its major concern is that the public take part in addressing them, rather than leaving decisions up to a handful of bureaucrats and interested parties. (See page 10, and Kapor's Open Road paper.)

Beyond that, there are important issues to consider and resolve, such as the definition and protection of Constitutional rights including privacy, free speech and assembly. In some cases, it's more important to have laws that are clear than precisely what those laws are. The world can adjust to most laws, as long as they make some sense and are consistent. Most interesting right now is the delicate tension over the classification of network services such as CompuServe and Prodigy. Are they pub-
lishers, liable for the information they disseminate, or utilities and common carriers, required to carry anything for the public at large -- and therefore not liable for its content? Or is this a false dichotomy (as AMIX's Phil Salin asserts): For example, a BBS might be like a bookstore: free to select the books it stocks and sells, but not responsible for their content individually (i.e., for libel, say). Nor is the bookstore responsible for what anyone says inside its walls. Yet some "adult" bookstores and record stores have been closed by local legal actions. The precedents are muddy. (See page 22.)

Finally, there's the awkward question of how to make the network good for people without stuffing culture down unwilling throats. If you believe that broadcast tv is mostly junk and public tv is mostly subsidized culture for the well-off, how do we make networks a people's medium -- real global villages rather than a global tv set or a global museum? Will people use them to communicate rather than vegetate if you make it easy? Can we regain the community involvement people lost when everything became too big and complicated? Are citizens' groups working over the net fringe groups, or are they harbingers of how everyone could get involved?

...and I

I came to all this with the benign American assumption that anyone apprehended by the police has probably done something wrong; spending time in Eastern Europe, watching the LA police videos and learning the details of some of the EFF cases have changed my perspective forever.

** A libertarian is a conservative who's been mugged by the police. **

I am now a board member of the Electronic Frontier Foundation. But don't worry, this newsletter won't become a mouthpiece for the EFF. In fact, when Mitch Kapor asked me to join, I responded that I was pleased and flattered, but not sure I should join; I certainly don't agree with all the views of the other board members. "That," said Mitch, "is the point." So, please note that this issue (or anything else I write) in no way reflects any formal position of the Electronic Frontier Foundation or its directors and members.

...and you (a targeted message)

In other words, I joined the EFF to help set its agenda, not just to help carry it out. And so, <NAME>, I strongly urge that you get involved too. You don't necessarily need to join an organization, but as a reader of Release 1.0 you probably are in a position both to influence and to be affected by the issues discussed here. You can help design the network, by helping to build it or by offering services over it. Ultimately you will use it to sell and distribute your products, find and support your customers and carry on business in general. As it fosters the use of computers and the generation of electronic data (both text and transactions) its presence will surely make your potential market larger.

-- Esther Dyson

PS -- We trade our subscriber list to people we approve of. How do you feel about that? Let us know; we'll act accordingly.

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In increasing numbers, people are using software on personal computers at home and at work, and trying out new interactive information services such as 900 numbers, news retrieval services and electronic bulletin boards. The Prodigy home information service (see page 23) now has a million "members" at $12.95 a month. People are also -- about 12 million of them, mostly at work -- starting to use two-way electronic communications...electronic mail. For now, e-mail is mostly text, and mostly hard to use. Ultimately, if we get the NREN and if phone companies and cable companies get their way and wire up our homes, electronic communications will be much higher-bandwidth, able to transmit videos, software, realtime video...and, as the marketers say, much much more.

A marketer's perspective

How do you create national interest when mass channels disappear? One answer the GBN discussion came up with is to use existing "brands" that transcend the channels, rather than trying to assemble the channels one at a time. Call this event marketing, where you create an event worthy of (or capable of generating) broad attention. This is why you see so many tie-ups between name brands and movie stars; big events and large corporate sponsors. A "brand" is a premium attached to something that can garner attention. But its economic value is earned only when it's attached to a product -- a soft drink (Coca-Cola), a movie (Julia Roberts), a perfume (Liz Taylor), a hotel room (Garfield), a newsletter (Seybold).

The nostalgia boom is a recognition of the power of the brands of the past; as a nation, we have fewer shared experiences now. As they become harder to create amidst the clutter, of course, brands that do exist have greater value. (And then there are negative shared experiences, such as the drug crisis, publicized by the press. Government figures are also "branded" by their association with the government, which presumably can garner attention of the community governed.)

The media fragment

Mass marketers looking at this new world fear the loss of broadcasting to cable and VCRs. They're starting to use different media: special-interest magazines, more direct mail, free neighborhood mailers (some with editorial content, some without), fax and the sorts of media Chris Whittle pushes -- videos in doctors' offices and schools, billboards, point-of-purchase displays. But electronic mail or BBSes seem like a strange way to reach consumers; Prodigy is still an anomaly to most advertisers.

Internet users, by contrast, see the world from the other side. Mail is slow and "dead;" e-mail is quick in both senses: You can filter it electronically, copy it, edit it, index it, reuse it. You can use e-mail to connect to all kinds of people, post messages for people you don't know, and get answers to questions from people who don't know you. They envision a world of people happily communicating by mail and bulletin boards, with nary a commercial intrusion.

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A brave new world?

What's the synthesis of these visions? Will marketers be sending us sponsored videos over the net for both business and consumer products? Will those compelling words on the screen -- "You have new mail" -- become an annoyance as our mailboxes fill with commercial messages, whether or not they're an invasion of privacy?

Notes GBN's own brand, Stewart Brand: "Now, the marketers are trying to find the consumers. In the future [if they are restricted by privacy legislation], the marketers will have to make it easier for consumers to find them." That is certainly one route, and product-oriented information services will burgeon. Customers will use databases to find cars, evaluate software, compare ketchup prices, order diapers, pick movies, find industrial suppliers, etc.

But marketers are uneasy with ceding all this control. How can they persuade customers to order their brand of diaper? Or better yet, how can they induce them to try a new brand of pizza? Or promote the image of a new brand of software? At a time when food products must list ingredients and cars must disclose mileage, how will marketers create magic?

How can advertisers be sure we see the stuff they pay to send us? Somehow, they must ensure that their messages are wanted and paid attention. In fact, it would be nice to see a few shows not targeted to women 18-49, but to people whose attention is captured by quality. This new environment will foster greater creativity in commercials. It will also, we believe, foster the rise of the consumer as attention-seller.

Litmus test: Does this make you see red? Or $green$?

"Yes, Juan, you and Alice can actually afford the spacious house you've been dreaming of for yourselves and cute little Lauren and Gabrielle. Leave those two bedrooms and single bath behind forever! There's even a garage with an automatic recharger for your 1998 Skoda Willow. Just fill in the 1-2-3 spreadsheet below to see the results for yourself! (We've included your current salary to get you started.)"

[Lotus pays 3 cents per reader for its mention in this ad. Skoda, the Czechoslovakian car company, pays nothing because that's actual individual data, which costs the sender of the message 2 cents minus commission, payable to Juan.]

In the end, it will become a war of filters: The consumer's filter to find stuff he wants and avoid all the rest; and the vendor's filter, to find the customers he wants. Both sides are trying to get the consumer (business or personal) what he wants in the way of information, but the vendor side is probably trying a little harder, since the consumer has the money.

The consumer will start as a more or less passive recipient of mail and programming. Then he will begin to send mail and search for information, to use electronic bulletin boards and program guides. He may set up rules...
about what he wants to watch, the information he wants to download from information services, the products he wants to buy, and the kinds of mail he wants to receive. He begins to take an active part in the process. ("I'll have my agent take a look at it," promises the busy executive. Of course, his agent is programmed to look for pricing information, not emotional appeals.) How does he get someone else to pay for the videos, the interactive fantasy games, and even the mail service? By selling his attention...

He who pays for lunch gets to choose the menu

The advertiser's role changes too. He used to sponsor programming, take out print ads, and send paper mail to consumers. Recently, he's added a toll-free number for customer support. Now he realizes he can post items to an electronic bulletin board (if commercial messages are allowed), for people to find with their filters (much like broadcasting); or he can do electronic "mailings" to people who match certain specs. Not just letters, these will someday include video sequences (clips of Magic Johnson, say) or interactive applications, such as a spreadsheet where you can compare your bank's mortgage deal to Fourth National Resolution Trust Corp.'s refinancing offer -- discount on points if you send the data back.

At the moment, lists of electronic subscribers are small (by direct mail standards). Interestingly, CompuServe (owned by H&R Block) sells the use of its subscriber lists, identified by user group, for traditional paper mailings through a mailing house (which manages the process and keeps control of the names). However, CompuServe does not allow commercial e-mail, in part because users have to pay to receive their mail. (That could change.) People can take themselves off these lists when they sign up for CompuServe or later on.

Prodigy (owned by IBM and Sears) is different, since ads are part of the service, at least in the non-mail parts, and transactions subsidize it. In addition to advertising "narrowcast" to viewers of a particular service, Prodigy also offers "commercial mail" for 50 cents or less per name, classified by age, sex and interest group. The service is limited to a total of two pieces (four screens each) per recipient per week. (Since the mailers are buying statistics, not individual recipients, there's no problem in observing that restriction.) Prodigy does the mailing itself; the mailer never sees individual names unless a letter evokes a response. So far, demand for commercial e-mail hasn't been great, says Prodigy's Geoff Moore, since the total universe of any target market -- sports fans, for example -- is rather small. But over time it should grow. Users can ask not to be included in these mailings. Meanwhile, Prodigy does not rent paper-mail lists -- which would cannibalize its electronic advertising.

Is it a commercial? Or a personal message?

Of course, since privacy is guaranteed (in theory) on every public e-mail system, there's no way for the system operator to monitor e-mail messages for forbidden commercials (or to get paid for them); it's up to users to complain about what they receive. As a rule of thumb, says CompuServe's Barry Berkov, any electronic mail sent to hundreds of people is most likely commercial, or some kind of solicitation, anyway, but it's still up to recipients to complain. (Even without a record of transactions, anyone can assemble enough of a list to be quite annoying.)

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The overall universe of electronic mail comprises about 12 million users, but the figures are exceedingly mushy. Moreover, a rarely used mailbox, a casual user or a work-time user are radically different from someone who lives "on the net."

Nonetheless, 12 million is a sizable number. Of that 12 million, the largest segment, about 8 million, is users on private networks, mostly those run by companies such as DuPont, IBM and Microsoft (usually over private channels within the public switched infrastructure). Another two million use "public" services such as MCI, GEnie, AppleLink (also from GE), Sprint-Mail and CompuServe. And another two million log on through the Internet. However, these distinctions are increasingly fuzzy and irrelevant, since all these services are becoming interconnected (although not transparently). People on the Microsoft network, for example, can get in and out through CompuServe; we use MCI mail to talk to friends in the Soviet Union over the Internet and then the Relcom network within the USSR.

The Internet is the outgrowth of the government’s ARPANET (for the Defense Department’s Advanced Research & Projects Agency), which is now widely used by research and education institutions, and also by commercial organizations for ostensibly research-related communications. The Internet started out government-funded, but commercial interests -- notably IBM and MCI -- are playing an increasing role in donating equipment and managing support and access for commercial, fee-paying customers and so forth -- acting as what Soft-Switch’s Mike Zisman calls information gas stations for the public information highways. To us this proves that private funding for the infrastructure makes sense -- and also that private and government funding can co-exist, although the balance is delicate and awkward.

As its name indicates, the Internet is mostly a backbone; it connects a wide variety of smaller subnets and has gateways to other e-mail services such as MCI, AppleLink, GeoNet and CompuServe. It is also the main carrier for USENET, a large, anarchic collection of bulletin boards starting with scientific topics long ago, and now extended to cover politics, sex, gardening -- information posted by individuals or groups on every conceivable subject.

National Research and Education Network

The National Research and Education Network is a proposed wideband network currently under consideration by both houses of Congress in slightly different bills. Funding would amount to several hundred million dollars over the next few years, as part of the government’s High-Performance Computing Initiative. Most parties are in favor of NREN in principle and both bills are likely to pass; the disputes mostly concern oversight and the particulars of which agencies and institutions would get to spend the funds.

NREN would be the successor and would incorporate the Internet, but it would have far higher bandwidth and would reach schools and libraries as well as the first tier of institutions now served directly by the Internet. It could carry videos and massive amounts of information. However, that bandwidth would not be accessible to ordinary households until those households are wired to it, by phone companies, cable companies or other volunteers.
But who pays for it?

The National Research and Education Network as currently conceived would amount to a de facto subsidy for the educational community and those linked to it -- a data highway with limited access on-ramps, to use a popular analogy. Despite restrictions on commercial activity, the Internet is regularly used for non-research purposes. We get frequent offers from friends to get us hooked up, proving that where there's no market, who-you-know determines access. On the other hand, the Internet has spawned a vital community of committed, activist users to help spread the word.

In the same way, DARPA funded a host of projects that have now turned into respectable commercial technologies. In fact, the global network would be an important national asset -- just like the railroads, telephones and other national utilities that helped us build a unified nation and a strong economy. While user fees will be able to fund most subnets of the global network in the long run, some government action may be needed to get them started.

In short, the NREN can be an important backbone for our emerging electronic infrastructure, as well as a source of culture, technology and feasibility demonstrations. With the NREN in place, we hope, marketers will fund its extension -- or complementary services -- for the rest of the country. Certainly, it's a low-risk investment if it can reach critical mass.

Meanwhile, the telephone operating companies should be unleashed to compete with the cable-tv companies and anyone else in wiring up homes. And as they appear willing to take on the tasks of funding and owning (and profiting from) the infrastructure, the government should step out of the way. (How much subsidy there should be for individual users who can't afford service, just as there is for telephones and other utilities, is another discussion.)

Calibrating the market

Total e-mail revenues today are impossible to calculate accurately, especially when you consider indirectly funded use of the Internet and use of in-house corporate nets. (How much would Internet use drop if users paid directly?) And are bulletin boards properly classified as e-mail (person to person) or information services (computer and person)? Many people use them for two-way conversations where others are invited to join in or just "listen." All things considered, we estimate it's a business on the order of $1 billion -- to the nearest billion. That's about $100 a year for each of the 12 million users -- low for serious users, but high for mailbox owners who never use them. Add in news retrieval and other information services, and the data communications market with a person on at least one end is probably close to $4 or $5 billion.

To calibrate that, consider these figures: Advertisers spent about $130 billion on advertising last year, according to McCann Erickson. Of that, $29 billion went to television, $33 billion to newspapers, and $10 billion to magazines. Direct mail accounted for $24 billion. Not included in this total are sales seminars, trade shows, customer support and lots of other communications with potential customers.

The mailing-list business -- rental and use of lists -- was about $1.2 billion last year, but that includes only formal transactions. It does not include mailings by list-owners for their own accounts, such as American Ex-
press, airline frequent flyer programs, and everyone else who has sold you one thing and would like to sell a little more.

As for the channels, almost 100 percent of the country's 93 million households have televisions, with more than 60 percent also reachable by cable services. Likewise, telephone service is almost universal in the U.S., although it is low-bandwidth.

OUR SCENARIO: LET THE MARKET HANDLE PRIVACY

Certainly economics indicates that companies will eventually want to use e-mail for targeted marketing; it's a powerful, inexpensive means of reaching people, and ideally suited to creating and disseminating tightly targeted messages. So the question is, how do they get to you? Is privacy protected by fiat, so they can only post information or sponsor shows they hope people will find? Or do Prodigy and CompuServe and Dow Jones and other future information services own the information on their customers, and offer to deliver the messages and sell one-time use of their lists for a fee?

Or can the advertisers pay a reasonable fee, to agents who want to a commission on those fees, for controlled access to consumers' personal information? We believe the last option is the best, since it offers maximum flexibility, protects individuals' privacy rights, and provides for the maximum flow of information in accordance with people's wishes.

Privacy absolutists say that people want privacy. Period.

Marketers say that they need a way to reach consumers, and an absolute right to privacy would be the death of commercial civilization as we know it. Besides, most people (aside from maniac liberals and hackers) like to get junk mail. They appreciate the chance to try out for a sweepstakes; they want the information and opportunities they receive from direct marketers. And finally, say the direct marketers, the more we know about you, the better we'll be able to target our pitches, saving money and trees in the process. You think we like sending stuff to people who don't want it?

So...why not let the consumers themselves decide -- and earn a little money in the process?

Conventional wisdom regards this as an intriguing idea, but overwhelmingly cumbersome to implement. Right now, the way we do it is negative-option on the one hand, and "We'll offer this movie for free if you'll sit through our commercials," on the other. These are crude, inexact methods that don't allow for nuance or individual control.

However, we believe the market could easily take care of the intricacies if the government would simply establish the principle: People own information about themselves. There would be exceptions, of course, just as there are exceptions to other rights, but they would be limited: The IRS has access to your financial data, but only for its own use; there are certain health reporting requirements, and so forth.

It's simple: Consumers control the use of their own data. They can sell it on whatever terms they please: one-time use, use only by specified kinds of
marketers, and so forth. Of course, there will be abuses, just as there are credit-card scams, insurance frauds and other crimes today, but those are prosecutable crimes, not mere annoyances we're powerless to stop. Large-scale annoyances by reputable corporations will stop. Offerings such as Lotus Marketplace, legal under current inexplicit law, would be illegal.

Power in anyone's hands is still power

The fundamental issue here is the inequality of power between the individual and all institutions: marketers, employers, government agencies. The problem is that all big organizations come to resemble each other in their power over citizens and their impenetrability. Even without meaning to, they can make someone's life hell. And when they do go after someone, they have huge resources unmatched by any citizen -- whose only recourse may be to go to another bureaucracy.

Privacy is paramount

Note that the right to own the information includes the right to destroy it -- or never to have the details recorded. You can still pay in cash, or destroy all your transactions after one month. In that case, the store that sold you the videotape simply gets a payment from the bank stating that $49.95 was credited to its account for transaction 5839674744. The store has no right to keep your name on file other than to complete the transaction, unless you have expressly consented, and it certainly has no right to sell records of your transactions, although it must transfer them to your data agent (for a fee) at your request. (See below.)

The underlying assumption is that data is sacrosanct, and belongs in perpetuity to the generator. He can assign the rights to use it, but in some strong moral sense, it is his. It is kept uniquely (with secure back-ups of course) by a designated data bank, which encrypts and guarantees its integrity. The owner can delete it, but he cannot change it. Nor can he add fictitious transactions to make himself look more attractive to marketers.

Right now people sign away their rights without a thought as they swipe their embossed cards through cranky overpriced machines at Comdex, provide their shirt-size and nickname to conference organizers, and fill out influence profiles with inflated estimates of their purchasing influence to gain free subscriptions to InfoWorld and PC Week. But this should change almost naturally as the rights of individuals to their data become established.

The birth of an industry

The simplest form of control (an extension of what we have now) is a refined negative option: "Check here to allow us to reuse your name just four times and get a free gift worth $5 or more!" That's fine for your average clothes catalogue, but people will quickly learn to hold out for more. From a jewelry catalogue, you may get a 3 percent discount on your purchase. From the department of motor vehicles, you may get more, especially if you allow them to specify your brand of car, and especially if it's a Mercedes.
a network service, you may get free or discounted service in return for selling rights to all your transactions, for agreeing to receive targeted mail, or for filling in a "preferences" inventory.

Is this the way we want to live?

We don't see any way of rolling the world back to a kinder gentler society, where surveillance was performed by spinster teachers whose lives revolved around other people's children, kindly drugstore owners who called parents if kids were out late, loquacious hairdressers who knew everything, smalltown bankers who lunched with smalltown lawyers and passed on confidences (in their clients' best interests, of course).

The point is that privacy didn't exist before either. Although these smalltown institutions lacked the power of a giant bureaucracy, they could destroy your life in your own community. Now, your relationships with these bureaucracies may be unknown to your neighbors, but they can likewise take over your life.

We can certainly change assumptions about privacy by legislation and by education (witness the change in smoking behavior, or the cycles in attitudes towards drugs and sex). But putting in place economic incentives for the protection of privacy is probably the best way to guarantee privacy in a world where information can and mostly should flow freely. (Personal decisions about marriage, children, education, are also influenced by economic factors. Money is generally a medium which allows people to make personal choices rather than follow the dictates of a society which expects everyone to make the same choices and optimizes things for people who follow the norm. Yes, people with more money have more choices -- and one big choice is to have less money and more children or more free time or less junk mail.)

We can also envision grocery check-outs, alongside the express lane, for people who want coupons and those who don't. "Use your credit card or fill in this form, and we'll give you relevant coupons at check-out to use on your next visit, as well as a special insert in a home-delivered copy of Single Suites, Happy Homes or Nuclear Family." Buy the hamburger? You get coupons for both Heinz Ketchup and Hamburger Helper. And you can expect a magazine with a special recipe-and-advertising section in your mailbox soon.

But if you prefer, you can buy your six-pack and your cigarettes unrecorded -- even if you use a credit card. It's the law.

Grocery transactions, of course, are at the low end of the scale, and will be handled in relatively mass-market ways. The more interesting patterns will emerge with more economically interesting behavior. For example, how much of a discount can you get for letting the dealer who sells you a car rent your name? Will American give you three free upgrades for the use of your name and flight data for one year? (Of course, if you fly first-class already, your name is even more valuable.) Personally, we'd be delighted if
American rented our name to British Airways and we got a free try-it-you'll-like-it upgrade from BA.

However, it's not just the rich vs. the poor, for two reasons. Marketers still want to sell ketchup -- and so they value information about who buys hamburger, even though the value of that information per person is relatively low. Secondly, there's a high value to information about specific consumption habits -- tennis gear, for example, or romance novels or airline tickets or hotels with swimming pools. Marketers' goal is first to find the market to which a product is uniquely valuable and second to avoid the rest.

Also, "advertising" becomes more of a two-way street: Once the contact between vendor and buyer is established, e-mail also allows further communication. "Sounds interesting," you might reply. "Do you have it in red?"

The industry matures

Vendors who deal directly with consumers will soon ask for the rights to license consumers' data to third parties. And as marketers start paying up for data, they'll expect data of higher quality -- and of course they'll pay more for data about higher-level consumers (payable to those same consumers).1

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The new buzzword in corporate names will be "data": In addition to banks and life insurance companies, there will be the Confidential Data Insurance Bureau, the Home Data Management Group, Personal Data Security, Juan & Alice's Data Boutique for upscale consumers who want personal attention from "Your Personal Data Manager."

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Certainly, consumers won't handle all the logistics themselves. Suddenly a new industry will take off. (If you think this is unlikely, just consider the firms that have arisen to help people monitor and manage their frequent-flyer miles, a far narrower market.) No longer will consumers blithely sign over the rights to their names. They may start getting interesting proposals: "We got your name from American. You gave them a blanket license to resell your name for one year. But we can do a lot better for you next year. Based on your consumption patterns, we'd like to represent your name in the coming year, for only a 5 percent commission. We can assist you in making better use of your most valuable asset, your name..."

Customers will search for the best deal in data banks as with other services -- and once they've found it, they will probably stay with it from inertia, just as people stay with a bank. On the other hand, some people may prefer multiple data managers, just as some people have several checking accounts at different banks.

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1 Not only do you find consumers of your products; you may also find consumers willing to pay more for your products, which is the principle underlying airline yield management, Release 1.0, 89-2. Or you may be able to fine-tune your products as well as your marketing pitch.
The result: Data banks

The natural origin of the data banks is the current group of credit-rating bureaus and list brokers. They have the relationships with the sources and the users of the data. What they need -- along with a change in attitude -- is relationships with the owners of the data, the consumers.

For the moment, of course, Prodigy and CompuServe and other electronic service vendors are the keepers of their own lists for (potential) electronic access. (Has anyone yet seen a response card that asks for an e-mail address, except perhaps in a UNIX magazine?) But marketers will want to meld those with transaction files from Equifax, Visa, etc. And the law will require Prodigy and CompuServe to hand the data over to a data bank anyway.

Indeed, we believe there should be some sort of Glass-Steagall act that keeps management of data separate from its use, just as a bank can't lend itself money. Managers of lists may not use them on their own behalf; marketers may not keep lists. Thus all the units of a marketing company must go outside to a data bank for their mailings or other direct-marketing efforts. (There may be some sort of exemption for salespeople with customer lists, doctors, local charities, college reunion committees, and other small special-purpose organizations.) Likewise, American can't just share names with British Airways; it has to go through a recognized data agent to do so.

Just as we have banks with government-defined and -monitored functions, so will we have data banks, regulated and monitored by government agencies. The agencies should have access to the data banks' policies and procedures, but not to their data (just as the government doesn't own the money in financial banks). Data auditors will check on the sources and uses of data just as they now check on their clients' sources and uses of funds. Other organizations can use the data supplied by the data banks, but they can't store it, sell it or consolidate it.

Competition: Checks and balances

Our support for this scenario rests on its potential to carve up the bureaucracies. Data is not a corporate asset, but a personal asset (optionally) managed by competing data banks. The data banks will counterbalance the power of governments and production/marketing concerns. It would be a stretch to say that they have consumers' interests at heart (they will have their own corporate interests at heart), but at least their interests will be aligned with those of the individual data-owners, and they will be guarantors of and lobbyists for the rights of the individual data-owners. Within the data bank industry, there should be enough strong players so that they need to compete vigorously on the basis of price and service to win consumers' business. (Sure, there's a lot of overhead, just as there's overhead to getting a mortgage from a bank, paying taxes and buying car insurance. By and large, that's the cost of distributing control instead of letting the government run everything.)

For economies of scale, there will probably be just a few large data banks, plus some boutiques. On the other hand, there will be fewer economies of scale for marketing companies. Since by law they can't share data among subsidiaries, they don't get all the benefits that have driven many recent mergers in marketing/media companies.
Better yet, these new fragmented media will give a lot of power back to the small guy, who will now be able to rent just a few targeted names -- or post a BBS message advertising his resume-writing service, babysitting availability, or custom window sashes. This should allow an unprecedented explosion of entrepreneurship, notes Don Peppers, an advertising man from a subsidiary of Chiat-Day who is about to publish a book on the subject. Suddenly the economies of scale that so favored mass marketing are about to disappear in favor of local services and custom products. No longer is the small entrepreneur relegated to supermarket bulletin boards and word-of-mouth; he can use the same media as the big guys to reach a specialized market on almost equal terms. And he can offer individual services that just weren't marketable before.

You and your data agent

When you make a purchase transaction, you designate your transaction agent, or (more likely) you use a credit card company which has blanket instructions to report everything to your agent, who maintains the transaction records. Then your agent takes over, finding marketers who want information on such transactions, in line with your explicit instructions. You can instruct your agent to maximize your income, or you can specify the kinds of marketers to whom you will and will not sell. You can also specify which preferences or transactions you want used or withheld. Your name and data get packaged in with all the other Porsche buyers, and you get your cut.

In addition, you can start negotiating with a vendor -- how much for the babysitting services, or the house? -- without immediately revealing your identity. The data bank holds it until you decide you want the vendor to know it...or not.

Your agent, of course, uses highly sophisticated software which enables him to handle you and hundreds of thousands of other consumers effectively. He also manages (or prevents) the aggregation of data; a single transaction is meaningless, but a pattern -- of kinds of goods purchased, locations visited, payment schedules -- could reveal more, perhaps more than an individual's wishes.

There will also be consolidators, who may specialize in particular markets, and who dream up and promote packages -- Porsche owners who summer in Colorado, for example -- and solicit data (probably through semi-private industry BBSes interconnected on the global network). These consolidators may use several agents to assemble a list for, say, marketers of foreign-language courses, Macintosh software or aluminum siding. The consolidators don't manage the actual data, which sits carefully controlled in your data agent's computers, until it is used one-time-only in a mailing, electronically or otherwise.

These one-time-use lists will be ephemeral creations. Technically, they're database views, data temporarily joined by matching values, not persistent tables that last after a single use. Although there will be no such thing as a unique national ID number, de facto we'll be moving towards better and better data integrity across databases -- which is why it's important to make those connections non-persistent. (Fortunately, as many customers know, vendors' promises of seamless distributed databases are mostly projectorware -- sales presentations, not reality.)

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But remember, all this happens only if you want it. You could still refuse to join in, or keep whatever information you wish out of the system. And of course you can designate different agents for different transactions or classes of transactions, just as you can have several bank accounts at different banks if you're so inclined.

By their transactions ye shall know them

The data banks establish the validity of the data they rent on behalf of its owners. One might expect that there will be grey-market data vendors -- cheap lists available from ex-employees, conference attendance lists collected and offered by attendees or conference managers. But these lists will develop a reputation for poor quality, inaccuracy, and incompleteness, as well as illegality. "Is it worth the risk?"

What are you worth?

What sort of money are we talking about here? It's hard to predict, but work on the rule of thumb that a "name" classified by some useful information -- bought more than $100 of home furnishings by catalogue in the last 6 months, subscribes to the Whole Earth Review, lives in New York and uses hotels in Palo Alto, registered as an Excel user -- costs from a few pennies to half a dollar at most. Straight neighborhood names -- all occupants at all postal addresses in ZIP Code 94303 -- cost much less, a cent or less per name.

So, as a rough calculation, assume you'd get a nickel or a dime for each piece of mail or telemarketing call you receive. That would be net of commissions to your agent. (Nationally, direct marketers spend about $4 per household per day, heavily skewed to high-income households.) Of course, you'll get less junk mail because marketers will be able to mail more carefully; on the other hand, they'll be willing to pay more for good information, and so you may get more mail that's relevant (if you want to sell them that information). In the end, you now control (in the aggregate) the amount of mail you receive. If Porsche owners as a group don't like to publicize that fact, those who do will be able to earn more by letting the information slip. As in any market, an individual may not be able to set the price, but he can decide whether or not to make a transaction at the price offered.

Also, self-reported data -- those little forms asking "What is your annual income?" -- will lose their credibility. As better data become available, marketers will focus on what you spend or what you want to buy rather than on what you say you make. (A stockbroker's meat, a fanatic investor too busy to spend his money, is a retailer's poison.)

2 This is no idle comment. We personally have no home telephone, although that's an extreme way of ensuring privacy.
Power to the owner

Another role of the data bank/data agent will be to help the consumer manage his data. In addition to specifying at the point of a transaction what may be done with the information (usually, just to send it to his agent), the consumer deals directly with his agent to develop rules about the use of his data. He can also examine the data itself, and see any specific queries a marketer might want answered. For example, he may decide to delete certain bar bills, or he may give his agent a rule that specifies, for example, "Delete all charges at Rusty Rocket." He may review questions that come in: "Fourth National Resolution Trust Corp. wants to know your payment record with all your creditors." You can instruct that the information be released, in aggregate, or you can choose to release only part of the information, in which case the recipient will be notified that the information is incomplete, but not what is missing. You can also mark a debt as disputed. You can have a standard credit information package that you instruct your agent to release to almost anyone (for the appropriate fee).

Credit card companies and other financial intermediaries

What happens to credit-card transactions and the like? Credit grantors such as Visa may maintain their own lists of customers, and they may even send out lists of bad cards, but that information can be used only for authorizing or refusing a transaction. They can't sell the information to anyone else, and they can't say anything but yes or no to a specific transaction for a specific amount. Once Visa says yes, it's assumed that there will be a transaction; patterns of abuse (people who assemble information without making transactions) should be easy to detect.

What happens when Visa wants to send a special mailing to all its customers who did more than $5000 of business in 1999? No, sorry, it can't just go look in its files. It has to go to the various data banks, who maintain that information, along with each individual's restrictions on its use. Awfully complicated, perhaps, but that's what computers are for. This is one reason that the data banks are likely to be large firms; the economies of scale for the data banks are compelling. But there will still be lively competition among them.

The basic economic question: Who wins? Who loses?

This will not kill the direct-mail business or the list-brokering business, but it will change its economics. Marketers who used to get such information almost for free must now pay for it, compensating the rightful owners, the consumers. Smaller companies, who had to rent lists from bigger companies, will continue to do so, but their proper use of those lists will be more closely monitored. Also, the prices of those names may go up, but the overall result will be better targeted marketing, happier consumers, and perhaps a reduction in the use of paper. Big companies who owned and rented or traded their own lists, will now have to do so through an intermediary, a data bank representing the interests of the data's owners.

The losers will be low-end consumers who enjoyed broadcast tv, junk mail and free samples, who may get less of them, and low-end mailers, who used to get almost-free information but will now get costlier, better information. The beneficiaries will be high-end consumers who sell their attention and get
less junk mail, the data banks who manage the data owners' data, and the software vendors and other third parties who support the new data bank industry. (Lawyers will no doubt get their cut, too.)

Marketing by e-mail

So what will marketers do with these lists? They'll do more than just send direct mail, that's for sure. Working on the assumption that broadcast, network TV has been replaced by videos, CD-ROMs, public and private information services, electronic mail, home fax, on-demand printing and the like. There's a lot more ways both to receive and to send information. In addition to tailored magazines (as we have now, with extra editorial/advertising sections included on a targeted basis for certain large groups). Advertisers have a number of options. They can post their information in public databases, akin to classified ads, where customers and buyers are looking for each other. They can also include ads in buying and shopping services, thus subsidizing those services. (Presumably someone browsing through the flower-ordering service is a good market for your ad about polka-dotted chrysanthemums.) These ads are offered to anonymous customers, for anyone who happens to look at the requisite service.

There will no doubt be great varieties of information services, from simple databases and ad listings, to consumer guides, to bulletin boards, magazines, conferences, etc. There may be options such as getting sponsored or unsponsored versions of any of these. With ads, it's free; without ads, $12.95 an hour. The ads could be a banner at the top of your screen (leading to ad-cracking programs just as we have code-crackers and protection crackers, but with less economic incentive).

Then, of course, there are special offers to the targeted audiences. "Mr. Porsche-Buyer, would you like to see this special sponsored movie, Life on the road with my Porsche, starring Hank Hotrod?" Probably not... More intriguing, perhaps, is this offer: "Ms. Excel-user/CPA, Would you like to watch this fascinating video on Tax tricks with Excel? [with information and an offer for a special macro library targeted to tax accountants]." Not now, but I'll download it for my assistant [raising interesting copyright questions; in this case, the advertiser would probably be delighted]. On the other hand, could you ask the advertiser to forward it to your assistant? Only if your assistant had given you rights to his name -- which will probably be covered in every employment contract by 2001.

And then there's straight-out E-mail pitches:

To: Your name here
Subject: An offer you won't want to refuse!
Text: Does your son ever drive your Porsche? Your pocketbook may be in danger! ...unless you buy our full-coverage liability policy.

Electronic countercountermessages: I'll have my agent read your message

But you're still not defenseless. You can have your agent check out your mail first. While marketers are using filters to get to you, you'll be using filters to keep them away. Text-based electronic mail is unique for now in that it can be electronically filtered and classified -- until we have robust image and voice recognition, anyway.

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Since users can filter their mail, marketers have a strong interest in finding only those potential customers open to persuasion, and in being persuasive (since customers can easily stop reading). Indeed, there will be a premium on being known for fascinating, funny or otherwise enticing advertising; a major value of a brand will be in persuading people to pay attention to a message. Even if a commercial is persuasive once they start to watch or read it, it needs a brand that will get them to select it (or not filter it out) in the first place. Some of those brands will be the traditional ones -- Porsche, perhaps, or "a New Yorker special." But there will also be other lures: "A Julia Roberts video." While you are selling your right to privacy, the marketer wants to buy your attention, on the assumption that it will lead to transactions.

As the press itself fragments, people may have favorite editors -- or video- or article-selectors -- rather than favorite magazines or channels. They may have a favorite sponsor who filters subsidized material for them along with some commercials or embedded product plugs. Or they may simply request the use of someone else's filter -- again, a piece of intellectual property that the owner may sell at whatever price he wishes, or not at all.

As you change your mind about what you're interested in -- you may be getting too much stuff from a certain political lobby, you decide you want to buy a boat or your job responsibilities change -- you can change your profile with your service bureau. (Ideally, this could happen automatically: As you stop responding to political appeals, the value of your name goes down; when you inquired about dock fees at Martha's Vineyard, that fact was retailed (at $1.55 a pop) to boat-oriented businesses all over. For example, just consider how First! updates its news services, both by asking what you found relevant and by asking if you want to add or delete any specific words from your profile. In other words, you can let the system pattern-match, or you can control it explicitly.)

And while vendors have an interest in effective marketing/selling to consumers, consumers also have an interest in the other part of marketing -- product concept and design. These direct channels make it much easier for a consumer to send information back, whether solicited through a questionnaire or simply in a fit of delight, anger or helpfulness. The free-form letters will probably be filtered too, and may not be read by anyone (tit for tat), but even statistics about users' concerns can be helpful in developing or improving products. Also, imagine being able to download not just instruction but perhaps executable programs for the inscrutable machine of the future (assuming VCRs will be user-friendly by then).

Tupperware on-line: A global village of user groups

Indeed, electronic communications holds the potential of creating electronic villages focused around products, much like the software user groups of today. We don't have the broad global village as people imagine it; we have narrow global communities, which are restricted not by geography but by common interests. That shared experience engenders a certain loyalty to the product around which the community is based.

Take CompuServe, which takes in well over $100 million a year (and growing) for its network-based information service. Out of a total of 300 "forums" (bulletin boards), 225 are focused on support of particular hardware and
software products. Most of these are sponsored by vendors such as Borland, Microsoft, Novell, Nantucket and even IBM (despite its association with Prodigy, which doesn't have such services). Their employees or agents act as sysops and run the forums, and the companies in turn collect royalties from CompuServe for the network revenues they generate. Other interest groups are focused on noncommercial topics, such as AIDS, gardening, politics. (There are also private forums, such as one run by Amway for its distributors, and beta-test forums for software vendors.) "We sell our users to each other," says Cliff Figallo of the WELL (Whole Earth 'Lectronic Link), a Bay-Area electronic community.

THE GLOBAL NETWORK -- WHO WILL (HOW CAN YOU) BENEFIT?

What does this mean for software companies? First of all, the networks comprising the global network are a medium for you to run your own business. Second, they represent a big market for software, just like money banks: There will be a need for transaction-monitoring tools, accounting tools to manage individuals' information accounts, licensing and brokering systems to manage assembly and rental of one-time-use lists. This software will be bought and used both by individuals and by their agents.

E-mail plumbing and groupware versions of most applications will be big sellers. In addition, there will be a big market for text-search, filtering and text-parsing tools for recipients of mail and BBS users. Although we're not there yet, people will want to handle much of their mail automatically, using agents such as those in Beyond's Beyond Mail and Agility/D&B's WiJit ...but more clever and more powerful (see Release 1.0, 10-89, 11-90, 2-91). Using clever parsers and other natural-language tools, recipients will be able not just to classify but to summarize their mail. They may be able to assemble their own comparison of products based on the few factual claims in a large body of ads and messages.

On the other side, vendors and others will want tools to help them create mail. First of all, there will be filters, pattern-matchers and other data-analysis tools to apply to carefully purchased data. (Consolidators will also use such tools to assemble packages of names. How much does it cost to examine a name (with associated transactions) that is then rejected for a mailing? The market will figure it out.)

I'll have my system generate a letter for your system to read

Then there will be automatic mail-generators that go well beyond today's mail-merge. Instead, they will be expert systems that assemble personal, coherent letters, either from transaction data or in response to automatically parsed incoming mail or bulletin-board postings.

At some point, one may wonder, why put people in the loop at all? And indeed, the volume of "mail" going between computers will probably exceed that between people. Right now, there are EDI (electronic data interchange) standards for transactions within some industries, and a few supplier-customer links; these will become ubiquitous. Eventually, there will be standards for routine people-to-people communications as well, so that you can confirm an appointment by filling in a form instead of a message (as you can now within the confines of certain office-automation packages.

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BBSes: COMMON CARRIERS OR PUBLISHERS? OR SOMETHING NEW?

In the new world of the global network, the owners of the hardware are mostly common carriers, selling network capacity to all comers and keeping their hands off the content. But what is the role of the people who retail network capacity, bill customers, run bulletin boards, manage directories, forward electronic mail, offer information, and now, potentially, filter information, manage mailing lists, sell advertising and so forth?

Are they simply business services, with no particular rights or responsibilities? Or are they common carriers, obliged to carry anyone’s words and data, or publishers, who select and edit information and are responsible for the content they disseminate? At this point, a lot of these roles are confused. Some are those of a traditional common carrier, some of a publisher, and some those of the owner of a neighborhood bar or a bookstore.

Separation of powers

The first commandment is that any vendor should keep separate roles separate, and make that separation explicit and visible. But what are the roles and the attendant obligations? The most controversial is that of a BBS operator, who acts as something of a publisher, but de facto has limited control over a profusion of material that he may not have the time to read thoroughly. Is he responsible for everything published? Is he like a bookstore, not responsible for the content of the books he offers? Yet bookstores have been shut down for carrying obscene materials. Which community determines the acceptability of information on a BBS? Its own users, or a broader set of potential users? Or someone else?

On the other hand, can a BBS operator arbitrarily keep people out of a "public" service? Common carrier rules are mostly for our protection against natural monopolies, but where there’s a profusion of channels, networks and services, should a single operator be compelled to serve all comers? (Compare newspapers and tv stations before cable.) On the other hand, does it have an obligation to protect its customers from offensive material?

Some people suggest that a BBS operator should not be liable for anything published as long as the operator can determine the individual responsible for the posting. But where does that leave the right to anonymity -- if there is one? Should there be special at-your-own-risk anonymous BBSes?

For example, Prodigy

This issue has had especially troubling consequences for Prodigy and for telephone companies offering dial-up services. As a private publisher, Prodigy has the right to control what is disseminated under its auspices; thus, it had the right (or even the obligation, by its understanding) to close down various "offensive" discussion groups, but it did so clumsily.

However, as a carrier of electronic mail it is obliged by Electronic Communication Privacy Act (1986) not to read mail. And, notes Prodigy, it did not. But it did throw a number of users off the system, basically for contacting advertisers and for overusing the flat-rate mail service. (It invited them back later.) Prodigy was asserting rights after the fact that it did not think to make clear earlier because it never took the mail component
of the service seriously. For example, it had the right to raise the price of its mail service, but it did so in what seemed like retaliation rather than a business decision -- and right after promoting its unlimited free mail service. This thrashing is due to the confusion between the two roles -- aggravated by poor business judgment.

It also reflects a culture clash between the Prodigy "Disney-style" family service, and a more vocal community of mail-users. Which is the true community the global network should serve? Better yet, why can't different components of it serve both?

Role confusion

All these different roles are confusing. There's no reason a single vendor/owner shouldn't offer a variety of services, although transmission should probably be kept separate from anything, including basic store-and-forward service for mail. What's infrastructure, and what is service?

Sprint, for example, has just announced that it will stop performing billing services for various 900-number companies whose services it judges questionable (for pricing or content reasons). Thus it considers its role as carrier to be a common carrier, but billing is a business service it can offer in a discriminatory fashion. Is that correct, or is a billing service part of the public-access infrastructure?

FURTHER QUESTIONS FOR EXTRA CREDIT

There are a lot of issues still to be addressed. For example:

Aggregate data: While one benefit of accurate data is less unfounded discrimination -- marketers will make fewer make assumptions about people’s spending based on where they live, for example -- they can still make predictions based on facts. How should people use these predictions? Do you fit the profile of someone who dies early from lung cancer, can't keep a job for more than a year, sues landlords, or other undesirable categories? Do blondes spend more on diamonds? What are the rules for keeping aggregates of data without names and other identifiers? And what about the consequences: Whether nonsmokers should subsidize smokers’ insurance rates is a serious public-policy issue.

Employment data: Employment data is a special case of personal data, but the same economic principles apply. Certainly employers, the users of the data, have a strong interest in its integrity and accuracy, just as employees have an interest in accurate information about companies. Also, what are the dynamics of people's opinions about other people, such as people who once worked with them. Don't pass another law! Let’s figure out how to handle this sensibly... Also, there's the issue of employee privacy, which can basically be handled by explicit disclosure of policies as a contractual matter: The level of privacy is a condition of employment.

Encryption: In order to ensure security, integrity and authenticity of the data, encryption is vital. This is perhaps the most immediate issue to be resolved, since the government almost passed legislation that basically prohibits widespread use of secure encryption, and export restrictions make

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it difficult for businesses to include encryption in their products if they don't want to do special versions for sale abroad.

Even with encryption, the government retains its current rights to compel someone to reveal data, although it can't break locks as it can to get at paper data. Instead, the government somehow has to get the user to surrender his key, and thus can't be done without notice. In other words, data can't be wiretapped, and it can't be revealed without the owner's consent and knowledge -- although he can be coerced by threats of fines and jail.

**Authenticity of data:** This is the other side of encryption -- the knowledge that the data you're seeing comes from the source identified. Linked to this is the issue of anonymity.

**Copyrights:** Aside from personal data (which become public domain if published rather than rented), who owns the expressions of information published over a net? (That is, the creative works, rather than the facts.) Who owns compilations of works that are individually in the public domain? What about selections of works -- i.e., filtered services? What rights does an author have to prevent reuse of his work, especially in altered form?

**Connectivity and accessibility (friendliness of interface):** None of this is likely to happen unless the networks get substantially easier to use, and it is easy to communicate with users on other networks. Diversity and competition are good from the standpoint of encouraging progress and fostering innovation, but none of this will matter if systems can't attract a critical mass of users -- as to some extent the Internet/USENET, Prodigy and CompuServe already have. Each is its own community.

**Payment procedures:** Part of the infrastructure of the global network must be a secure system for financial transactions as well as for network usage itself. Many users will start paying per item, ordering things through the network (as with Prodigy), and so forth. A way to settle accounts through the net, with worldwide standards for doing so, is vital.

**Two-way transactions:** We've focussed on a person's rights to his data. What about the other side, especially when two invididuals are involved or it's a large transaction? Basically, assignment of these rights is just one more facet of a transaccion.
RESOURCES & PHONE NUMBERS

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Marc Rotenberg, Computer Professionals for Social Responsibility, (202) 544-9240; (202) 547-5482; rotenberg@cslu.stanford.edu or marcind@well.sf.ca.us
Mitch Kapor, Electronic Frontier Foundation, (617) 864-1550; fax, (617) 864-0866; email, mkapor@eff.org
Mike Cavanagh, Electronic Mail Association, (703) 875-8620
Lawrence Wilkinson, Peter Schwartz, Global Business Network, (415) 547-6822
Don Peppers, Perkins/Butler Direct Marketing, (212) 886-5927
Mike Zisman, Soft•Switch, (215) 640-7448
Geoff Moore, Brian Ek, Prodigy, (914) 993-8000

For further reading:
"The Open Road," by Mitch Kapor, available from the EFF
"Notes on freedom of electronic assembly and privacy," by Phil Salin, Amix
Submitted papers for the First Conference on Computers, Freedom and Privacy (as well as the proceedings as soon as they're available), from CPSR or conference chairman Jim Warren, fax, (415) 851-2814; or jwarren@well.sf.ca.us
"The Matrix," by John Quarterman, Digital Press, 1990, plus his Matrix News newsletter, (512) 320-9031, fax, (512) 320-5821; e-mail, mids@tic.com
"Paradigm Shift," October 1990, an issue of this monthly devoted to the "National Information Infrastructure," from Patty Seybold’s Office Computing Group, (617) 742-5200
"Post-Industrial Issues," a newsletter from Michael Goldhaber, (415) 648-5742

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## RELEASE 1.0 CALENDAR

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<th>Date</th>
<th>Event Description</th>
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<td>July 14-19</td>
<td>AAAI conference - Anaheim. Sponsored by American Association for Artificial Intelligence. Also includes Innovative Applications of AI. Call Carol Hamilton, (415) 328-3123.</td>
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<td>July 15-18</td>
<td>Network computing conference and exposition - Washington, DC. Sponsored by IDG World Expo Corporation. Call Brenda Cone, (800) 225-4698 or (508) 879-6700.</td>
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<td>July 23-25</td>
<td>Downsizing conference - Chicago. Sponsored by Boston University Corporate Education Center. Call Todd Langton or Chatol Olson, (508) 649-9731.</td>
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<td>August 19-23</td>
<td>SCO Forum91 - Santa Cruz, CA. Sponsored by The Santa Cruz Operation. Call Zee Zaballos, (408) 425-7222.</td>
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<td>September 4-6</td>
<td>UNIX Open Solutions - San Jose. Sponsor: Interface Group. Keynotes by Scott McNealy, Sun Microsystems; Douglas Michels, Santa Cruz Operation. Call Elizabeth Meagher, (617) 449-6600 or (800) 325-8850.</td>
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September 10-12  DataStorage91 - San Jose. Sponsored by Freeman Associates and Disk/Trend. Call Darlene Plamondon, (408) 554-6644.


September 11-14  Software Publishers Association annual conference - Orlando. Sponsored by SPA. Call Ken Wasch, (202) 452-1600.


September 15-19  *EastEurOOPe '91 - Bratislava, Czechoslovakia. Sponsored by JOOP, ParcPlace, Xerox, Digital, Software Slusovice, Kancelarske Stroje, others. With Adele Goldberg, Krysten Nygaard, Pierre Cointe. In English. New developments, new people. Contact: Augustin Mrazik or Peter Mikulecky, 42 (7) 724-826; fax, 42 (7) 725-882; e-mail: eeoop91@mff.uniba.cs.


September 25-27  *Second European conference on computer-supported cooperative work - Amsterdam. Organized by the Center for Innovation and Cooperative Technology of the University of Amsterdam. Call Mike Robinson or Liam Bannon, 31 (20) 525 1250/1225; fax, 31 (20) 5251211; e-mail, Bannon@learn.ucd.ie; or Charlie Grantham, 1 (415) 370-1744; cegrant@well.sf.ca.us.

Sept 30-Oct 1  Virtual Reality conference - San Francisco. Sponsor: Meckler Corp. Call Marilyn Reed, (203) 226-6967 or (800) 635-5537.

Sept 30-Oct 4  *Seybold Conference - San Jose. The leading event in the computer publishing community. Sponsored by Seybold Seminars/Ziff. Call Kevin Howard or Beth Sadler, (213) 457-5850.


November 10-13  **Second East-West High-Tech Forum - Warsaw (Prague in 1992). Sponsored by EDventure Holdings. With a roster of serious-minded entrepreneurs and vendors from East and West. Don't just come to listen to advice; come to mingle with the people making it happen. Call Daphne Kis, 1 (212) 758-3434 or fax (212) 832-1720; MCI Mail: EDventure, 443-1400.

February 23-26  **EDventure Holdings PC (Platforms for Computing) Forum - Tucson, AZ. You read the newsletter; come meet the community and try its tools. Call Daphne Kis, (212) 758-3434.


Please let us know about any other events we should include. -- Denise DuBois
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Daphne Kis
Associate Publisher