Electronic Publishing and Information Flows: Europe and the United States in Conflict

by Eli M. Noam

Electronic publishing rests technically on the twin foundations of *information storage* and *communications links.* Communications satellites and decreasing computer costs make electronic publishing time-sensitive and distance-insensitive compared to traditional publishing, thus favoring global undertakings. It may be more cost-efficient for a new user to link up with a large established data provider located abroad than with an unestablished smaller domestic supplier. This economic logic creates new international problems and gives rise to restrictions on both data storage and communications. American firms are among the most affected, since they have a leading position in the field.

ECONOMICS OF THE SITUATION

For online data services, European firms have revenues only 10% of those of U.S. firms.[1] The explosion of personal computers and office equipment has been significantly greater in the United States than in Western Europe, and has widened this disparity even further. Europe's share of the market, expressed as a percentage of the U.S. share, slipped from 62% to 52% for general data processing services between 1978 and 1982. During that same period, Japan maintained its percentage share relative to the United States

and increased its percentage share relative to Europe (from 31% in 1980 to 34% in 1982).[2]

International trade in online databases between the United States and Europe is almost entirely one-sided, with the United States supplying between 45% and 65% of European databases on science, patents, agriculture and pharmaceuticals. For example, the United States provides *British Physics Abstract*. A trade imbalance in an area as important as information and computers calls forth governmental policies to alleviate the problem. These policies, generically termed "industrial policy," are a set of targeted measures designed to promote high technology industry. A major element of industrial policy is tariffs. But the ephemeral nature of information makes the use of tariffs difficult and distorting. There are several aspects to this problem.

First, the *value* of information is undefined. Second, information is not a physical good, and it can be shared by many simultaneously. Thus its *location* is unclear, as well as whether it actually crosses national boundaries. Third, its *volume* is indeterminate. The distribution of information by means such as satellite makes it virtually impossible to identify recipients or their number. Information transmission would need to be monitored continuously and a tariff assessed on its source in another country.

It may be objected that commercial suppliers would not send information out without first establishing some relationship with paying customers. But information can be funded through advertising or distributed with other services in a "tie-in" relationship. For example, brokerage houses make financial data available to their customers at no charge.

NON-TARIFF BARRIERS

Given the difficulties of using tariff restrictions, non-tariff barriers become particularly important. Governmental operating control over the channels of information is a potentially powerful lever of industrial policy.

Privacy Concerns

A major concern with information flows is the impact of computers and data storage on individual privacy. The tremendous capacity of computers to store vast amounts of information, to centralize individual data from a large number of sources and to rapidly recall and disseminate information increases the risk of governmental and private surveillance over individuals.

Information flows in interactive data systems from the user to supplier as well as from the supplier to user. Users' data requests reveal much about the

users and their activities. Some of this information is likely to be stored by the data supplier, if for no other reason than for billing. This creates a potential privacy problem and the regulatory nexus for subjecting database providers to privacy law restrictions. Examples in the United States have been interactive cable systems such as Warner-Amex's Qube, whose potential invasion of privacy has brought about state regulations and municipal franchises.

Privacy concerns are especially prevalent in Europe.[3] In 1970, the West German state of Hesse passed what was probably the first privacy law relating to computerized information. This was soon followed by similar laws in other German states and other countries.

National Security

One problem is that data protection laws might be evaded through cross-border operations. As an awareness of this problem developed, there emerged a movement to "harmonize" data protection practices among nations. The alternative was to restrict the flow of personal data. Another major concern in data flow is the threat it poses to national sovereignty, through providing foreign governments and institutions with access to important domestic data. France, for example, is troubled by the use of American econometric models to project French economic trends. This may indicate a certain overestimation of American interest in the French potato crop, but the reality of the threat is less important than the political actions taken in response.

Elsewhere on the international scene, the Intergovernmental Bureau of Informatics (IBI) was established in Rome to develop Third World understanding of information technologies and to formulate policies. In 1978, the conference of Strategy and Policies for Informatics (SPIN), held in Torremolinos, Spain, concluded with a declaration that "Any nation that wishes to remain sovereign must achieve independence in informatics."[4]

International Regulations

The United States has sometimes imposed restrictions on the export or use of strategic American databases, exacerbating European concern. An example is U.S. pressure on Western European countries to cancel the Soviet gas pipeline deal. The government ordered Dresser Industries, a producer of compressors essential to the project, to restrict French engineers from accessing the design data in Dresser's computer. Another example is Lockheed's contract with the Austrian-based International Institute for Applied Systems Analysis (IIASA) for Lockheed's publicly available Dialog database. After the

U.S. government became concerned that the Soviets would gain access to strategic U.S. data through their links with IIASA, the deal was cancelled.[5]

Such concerns led to guidelines by the Organization for Economic Co-operation and Development (OECD) on data flows and to the Council of Europe convention. The resulting Council treaty (when ratified) will directly affect U.S. companies including electronic publishers. It allows any country to restrict the export of data to any other country that does not have legislation on data protection comparable to its own.

One goal of such agreements is to prevent the emergence of "data havens" that circumvent national data protection laws. This could have a major impact on electronic publishers who operate in several countries and regularly collect data across boundaries. Enforcement necessitates some form of monitoring, registration and restrictions on encoding. The result, in the name of privacy protection, may in effect be massive government intrusion on privacy.

Restrictions on information and transmission are not neatly separated from each other. Computer data services may be economical only with leased telephone lines. If PTTs do not make leased lines available in order to control transmission, they are thereby exerting a non-tariff barrier.

When Control Data Corporation and Tymshare Corporation in the United States wanted to enter the Japanese market, Kokusai Denshin Denwa (KDD, Japan's international carrier) required that leased lines be connected to no more than one computer center in the United States. Given that each company's U.S. configuration involves a network of computers, this condition was tantamount to denial of entry. The Japanese feared that users would switch among various locations within the United States, making the information service into a transmission service competitive with KDD's.[6]

Other PTT barriers include high tariffs, abolition of flat rates for leased lines, and the requirement that research funded by European governments use European-based, online services. These types of restrictions put pressure on service providers to move their databases into the using country.

The Case of Brazil

Brazil is especially restrictive in this regard, probably more so than any other Third World country. As Brazil's chief informatics officer explained, "Brazil . . . prefers that copies of the databases are installed in the country. If copies cannot be provided, Brazil considers the database service to be a telecommunication service which falls under the state monopoly and is to be provided by Embratel [the Brazilian telecommunications company]."[7]

These restrictions provide the Brazilian PTT with a large amount of control over data flows. "Embratel has made agreements with major data suppliers

operating through Telenet to provide services to Brazil, and has signed agreements with the major commercial online database vendors of the United States and France."[8] Without these agreements, Brazilians would have no access to foreign databases unless suppliers physically located them within Brazil. When possible, this provides employment in data processing. In most instances, however, suppliers will not fragment their operations, so Brazilian users are denied access to the information.

PROTECTION OF PTT MONOPOLIES

The efforts at protection are part of a larger conflict. The traditionally secure monopolies of PTTs are being challenged on many fronts. The potential for private and value-added networks inside and outside of their infrastructure threatens to reduce the revenues and control of the PTTs, and encourage resale of telecommunications and entry of alternative carriers. This raises the specter of international, integrated telecommunications companies, mostly American, providing communications, data processing, databases and links with other databases.

> The emergence, under the leadership of the U.S. information industry, of powerful integrated service firms, consortia of closely knit groups of companies, combining computing power of their own without precedent, unrestricted access to countless databases, assured usage of worldwide networks, an expertise unparalleled in variety and depth, together with unique marketing and managerial abilities. . . has—so far—no equivalent in either Europe or Japan. It may well turn out to be superior, in power terms, to the old-fashioned monopolies and oligopolies.[9]

GTE Telenet, for example, links GTE and its Sprint U.S. long-distance network into its own exchange networks. It employs GTE's equipment manufacturer, local exchanges, manufacturers of packet switching equipment and special computer terminals. Such organizations could be aggressive, innovative, responsive to users and flexible—in short, everything that PTTs are not. Furthermore, they would not be encumbered by the social functions that PTTs must perform.

Protectionism imposed on information flow is harmful to Europeans as well as to Americans, since American electronic publishers provide Europeans access to information, databases, processing capabilities and software.[10] Economists discount the argument that protectionism encourages development of domestic databases. If an infant industry is to be encouraged, they contend, directly targeted subsidies are more efficient aids than across-the-board restrictions.

European governments feel the need to assist and promote their domestic information industries in light of the more advanced American and Japanese firms. They use the arguments of privacy and sovereignty to promote non-tariff trade barriers:

> Complicating this whole area is an underlying suspicion that many of these barriers are erected to achieve economic objectives (through protectionist measures) and are merely cloaked with a label of respectability. This is perhaps one of the most sensitive areas for consideration in Transborder Data Flows, and at the same time, one of the most complex.[11]

The intended beneficiaries of PTT policies aimed at helping domestic information industries consider them a mixed blessing:

> The business of our member companies, particularly the service bureaus, is adversely affected if the flow of data into and out of a country is restricted. We have identified that the major factor restricting the international business of European remote computer services is the monopoly position of the national PTTs with their high pricing and restrictive regulations.[12]

Over the years, a grand coalition in telecommunications policy has evolved to maintain the status quo. This "postal-industrial complex" is led by the PTTs, which share the benefits of their monopolies with other groups, such as the equipment manufacturers. The manufacturers set the tone for private industry on matters concerning communications policy. They are entirely comfortable with a system in which PTTs organize them into a cartel, in effect shielding them from foreign (including intra-European) competition by preferential procurement practices.

Similarly, emerging computer companies and data processors, rather than favoring reduction of PTT dominance, are frequently parts of existing telecommunications giants such as CGE or Siemens. They are likely to be dependent on, and potential beneficiaries of, the PTT-dominated industrial policy. Labor unions also traditionally have strong interests in supporting the principle of PTT monopoly, both for economic and ideological reasons.

Given such agreement among unions, influential segments of the business community, the poor, the political Left, intellectuals, rural inhabitants, small towns and the elderly, all of whom are concerned with an erosion of their positions or subsidies, it is hard to imagine many changes taking place in the short run. The fact is that the present monopoly provides significant benefits to numerous groups of society.

Arguments against monopoly are essentially hypothetical. It is difficult to illustrate convincingly that technological development in Europe is being

significantly hampered, or that the cost of doing business in Europe is increasing, thus reducing international competitiveness. Even if true, these arguments may work to reinforce the orientation of the system toward monopoly and protectionism to meet the American and Japanese challenge. It is a vicious cycle, with no simple escape.

This is the dilemma of U.S. electronic publishing in Europe. Europeans are under pressure to transform the status quo in telecommunications. But the changes they are making do not parallel those done in the United States. Different approaches toward institutional innovation make conflict unavoidable, inevitably affecting electronic publishing across the Atlantic.

REMARKS BY HENRY GELLER

There is a difference in the European and American approach to privacy legislation. The European way, in France, Sweden and other countries, is to pass an omnibus bill dealing with all sectors and establish one powerful central administrative agency.

In the United States, the 1974 Privacy Act dealt only with the federal government. It provided for a Privacy Commission, whose 1977 Report the Carter Administration tried unsuccessfully to implement. Congress was unwilling to enact legislation. Unlike the European approach, the proposed legislation was not omnibus, but tailored to the insurance, medical and consumer credit industries. It did not interfere with the established flows of information.

At the FCC, we rejected the notion of ascertaining what kind of information should be collected. We told the industry to continue collecting the information it desired, but it must let the public know fully what is collected and where it will flow. The industry is then limited to the flows so disclosed.

The legislation also provided for a right of access to look at one's file, a right to know the informational base if there was an adverse decision, a right to contest the file information and have the dispute noted and an expectation of confidentiality. There was no provision for a central administrative authority. Rather, the individual would have the right to go to court, with liquidated or punitive damages limited to particular situations.

The issue may return. The Harris study showed that people are concerned about privacy in the computer age. They feel they are losing control and want to redress the balance. The issue may also resurface in the context of the international considerations mentioned by Eli Noam.

The Council of Europe provides for information to flow to a country only if that country affords proper privacy protections. If medical or insurance information is going from Europe to Ohio via satellite for data storage and processing because it is cheap and efficient to do so, that information must

receive bedrock privacy protection in Ohio. Such considerations could lead the United States to institute basic privacy protection.

The issue of privacy in transborder data flows may be a solution in search of a problem. During the Carter Administration, we studied this matter in the OECD and found no interruption in the flows of information. One might raise questions about future possibilities. Would the Europeans try to tax information? Would they extend privacy protections for individuals to corporations? And so on. But these are simply questions. They do not negate the validity of the guidelines adopted by the OECD.

Privacy is not a partisan issue. When the Reagan Administration took over, Commerce Secretary Baldrige sent a letter to the top corporations informing them of the OECD guidelines and urging that they be followed. If these guidelines were embodied in legislation, I think both parties could support them. The Europeans are correct to be concerned about privacy. But the provisions in the OECD guidelines do not adversely affect U.S. operations. I therefore question whether transborder data flow is a serious issue at this time. The situation is different in a country such as Brazil, where an insistence on internal data processing holds sway.

DISCUSSION 1

Harry Smith doubted Henry Geller's statistics on privacy.

> (Smith): After the CBS test, we asked the Ridgewood people about their concerns. Was the system too slow? Was there enough shopping? They were concerned that if the banks mishandled their accounts, there would be no written record to help straighten things out. But privacy never came up. It only became an issue when the questioner went back and asked about a list of things including privacy. Respondents never volunteered a privacy concern. Prior to the test, we told them we were going to collect all of this data about them. They signed a waiver agreeing to it. I would like to see how the privacy question was worded in the Harris Poll.

Geller replied that the Harris Poll was commissioned by Sentinel Insurance Co. and released in 1980 with much fanfare. The poll found that people in the computer age were concerned about losing control and expected confidentiality. Charles Firestone added that the concern is more with cable than videotex, where one entity controls the interface to many transactions.

Further Remarks by Henry Geller

There are two things people fear. The first is government. The government should get information in a fair way. Telephone toll records should be confidential; these records should not be the property of the telephone company to turn over to whatever local, state or federal government official wants to view them. Why not make the government get them through proper process? We are proud of the Right to Financial Privacy Act passed in 1978; it says that the government cannot walk in and obtain bank statements and information without notice, except in certain limited situations.

The second fear is of unfair information practice. This occurs primarily in areas like credit and insurance. Fair information practice dictates that when one collects information, there should be fair play. People should know who is collecting what so they can make an informed market choice of services. They should know when an adverse decision is being made, based on information.

Nobody wants to interfere with vital flows of information. Nobody wants to set up a regulatory agency. We simply want to establish some fair principles enforceable in court in egregious situations.

On another subject, there is concern that some European countries may end the use of private leased lines. These lines are important to U.S. companies because they make it much cheaper to move information to satellite earth stations. The Europeans threaten to foster their public data networks and eliminate private lines if we adopt international resale policies.

This is a difficult issue. I think the elimination of private lines would be a mistake and a move in the wrong direction, since it leads to inefficiency and lower productivity. But if the European country does it in a nondiscriminatory fashion—that is, does not single out our multinationals but moves everybody to a public data network—it is entitled to run its communication system in the way it desires. As long as the national policy is nondiscriminatory, I have difficulty knowing what you can do other than protest that it is bad policy and will hurt the nation employing it in the long run.

The present issue concerning Intelsat is interesting. The United States sought to bar any country from initiating satellite service unless it got Intelsat approval. The French fought it and lost. All the agreement requires now is for signatories to coordinate. Lack of approval does not result in prohibition. The Intelsat agreement is not a treaty. It is an executive agreement. The requirement for each signatory to *coordinate* with Intelsat on the engineering and economic impact of its proposed satellite systems does not make Intelsat approval a sine qua non.

I would assume therefore that the FCC would move forward with a service even in the face of an adverse reaction from Intelsat if it finds the service to be in the public interest. There may be difficulties because Intelsat's rates are not subject to FCC control. If the Intelsat monopoly were to be broken, I would expect it to happen not just because of Orion and the several other applicants, but because of technological developments such as the fiber optic cable coming in 1988. There are many examples of technology's rapidly changing an existing monopoly situation.

Proposed U.S. policy is to permit competition with Intelsat only in the area of private lines, not in the message toll field where Intelsat has the great bulk of its revenues. This should give everybody a feeling of déjà vu. We stated in the early 1970s that we were only opening up domestic private line service for competition, never message toll service. Private lines represent less than 2% of AT&T's revenues. The same pattern that occurred domestically is likely be repeated internationally. I think the United States should face its devils and say honestly what it is doing.

As Eli Noam suggests, PTTs simply do not want to lose their monopoly grip on telecommunications. But there is a larger policy question. The divestiture of AT&T in the United States was driven by AT&T's desire to enter the new competitive field of information or enhancement. It could not do so as a giant monopoly controlling bottleneck facilities. At every step of AT&T's competitive entry, it would be harassed by regulation. So AT&T released its local monopolies in order to be allowed to effectively enter the new field.

Europe has the same prospect. The Bundespost and French PTT claim they will stick to transmission and respond promptly to all new telecommunications technology. But can they stick to being just a monopoly pipeline? Are they not driven like AT&T to enter the new information fields? If so, how can they do it when they are the giant telecommunications monopoly—the base for all competitive entries into these fields?

DISCUSSION 2

Richard Hooper mentioned a number of forces working to destroy the European PTT monopolies.

> (Hooper): First is the United Kingdom's adoption of American-style deregulation. French and German PTTs know that American corporations are setting up their European headquarters in London, not Paris or Brussels, because they get cheaper, more competitive telecommunications there. Once you introduce competition into one part of the European system, it will tend to

spread throughout. Second is the success of IBM, the smartest multinational of all time. IBM has 60% of the world computer market. Its rippling competition is having a devastating effect on the PTT monopolies. Third, business customers are fed up with inadequate telecommunications services. When they are told that they have to use the public packet-switching network, as is being done in France, and are not allowed to use private lines, they become vociferous. If their countries have right-wing governments, those governments will listen. Fourth, the technology itself is counter-monopolistic. The widespread adoption of VCRs is a good example.

Eli Noam pointed out that a European Commission antitrust decision made in 1983 prevented the exclusion of third-party traffic on antitrust grounds. Telex offices in London were routing traffic from European countries to the United States and Canada through London at a significantly cheaper rate. British Telecom, still monopolistically minded at the time, tried to prevent this. It later changed its mind, but was sued successfully anyway in the European Commission by the Telex firms. Italy appealed, suing the United Kingdom for maintaining these controls. The case, before the European High Court, goes far beyond telecommunications issues, according to Noam. He considers it possibly a landmark European case on national sovereignty.

Herbert Dordick noted similar trends emerging in the Far East.

(Dordick): The Japanese have already begun what they think of as a seven-year process to "privitize" or add better management and competition to telecommunications. As Singapore, Malaysia and Thailand begin to reorganize and rethink their telecommunication networks, they too are considering making them more private, getting away from the model of the PTT. The major pressures on them are the attempts of their computer and information industries to grow. Computer people in Indonesia sound amazingly similar to computer people in the United States 10 years ago, complaining about the lack of good communications for high-speed data. Pressures come from home-based as well as multinational user firms. A lot of Asia's Telex messages go through Singapore because it is cheaper than going through KDD, just as most of Europe's go through London. This is another reason why the PTTs are not viewed favorably today.

Noam believes the PTTs have nevertheless been quite successful at integrating or co-opting new data processing companies. PTTs play a key role in industrial policy through procurement, development and protection. They are in the process of bringing companies previously outside the system into

the club, according to Noam. He feels the data protection they provide is an important part of that process.

NOTES

1. G. Anderla, "The International Data Market Revisited," Presented at OECD Second Symposium on Transborder Data flows, Special Session of the Committee for Information, Computer and Communications Policy, OECD, (DSTI/ICCP/83.25, October 25, 1983), p.5.

2. Ibid.

3. Kathryn Custance, "Privatisation of BT: Will It Be the Sale–or Sell-out–of the Century," *Communications Management* (September 1983): 20-26.

4. Tein Turn, "Transborder Data Flows: Concerns in Privacy Protection and Free Flow of Information," Report of the AFIPS Panel on Transborder Data Flow (Washington, D.C.: American Federation of Information Processing Societies Inc., 1979), p. 7.

5. Russel Pipe, "Getting on the TDF Track," *Datamation* (January 1984): 12.

6. Geza Feketekuty and Jonathan Aronson, "The World Information Economy," Presented at Conference on Policy Issues in the Canadian-American Information Sector, Montreal, November 17-18, 1983.

7. Joao Carlos Fagundez Albernaz, "Brazil's TDF Policy Builds National Independence," *TDR* (January/February 1984): 50.

8. Ibid., p. 50.

9. Anderla, op. cit., p. 27.

10. W. H. Montgomery, "Transborder Data Flow–Canadian Directions," Keynote Address to the OECD Symposium on Transborder Data Flow, London, England, November 30, 1983.

11. Organization for Economic Cooperation and Development, "Transborder Data Flows: An Overview of Issues" Working Party on Transborder Data Flows (DSTI/ICCP/83.29, September 5, 1983), p. 10.

12. Ibid.