Emerging Electronic Highways

New Challenges for Politics and Law

Edited by

Victor Bekkers, Bert-Jaap Koops and Sjaak Nouwt

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FOREWORD

The electronic superhighway has been characterized by the American writer James Gleick as 'billions of dollars in search of a future'.[1] As the author of books titled *Chaos* and *Genius*, he should be in a position to know. Between the two poles of Genius and Chaos an exciting vista of a virtual society opens up.

As so often, however, the future is at least partly in the past. As a policy concept, the superhighway builds upon earlier initiatives such as the "Office of the Future" or HIT (Home Interactive Telematics) and the Integrated Services Digital Network (ISDN). These earlier efforts have not fulfilled the promises of their promoters. Why not? This question has been good for shelves full of reports, studies and treatises. The "diffusion of innovation", as it is called by sociologists, is a complicated process.

The present book draws attention to one particular aspect that tends to be overlooked: the normative quality of new applications. Or to put it more bluntly: a basic lack of trust on the part of the citizen about their rights in an information society. An early lesson was the census, which virtually led to a citizen's revolt twenty-five years ago in the Netherlands and ten years later in Germany.

It would be a mistake to think that people at that time got worked up merely because of some details in the questionnaire or the precise time limits for the storage of certain data. The census "revolt" was the expression of a general but deeply felt sense of unease about individual rights vis-à-vis new information technologies and it was only triggered by an application — such as a census — which touched every citizen. The issue at stake was "informational self-determination", as was recognized by the Federal Constitutional Court in Germany.

Multimedia also endeavour to involve all citizens. So, beware of the census experience and take the rights of its intended users seriously!

The design and development of the new electronic routes are usually considered to be a matter for technical experts. But the aura of hi-tech to a great extent only serves to mask the highly regulatory content of seemingly technical choices. It may come as a surprise to the average lawyer who only recently — and often reluctantly — has come to terms with elementary PC use, but the shape of IT services more often than not is dependent on legal rather than technical choices. One British expert even held that 'regulation has become the single most important factor determining the future of telecommunications and, indeed, the information industry in general'.[2]

The Dutch cable networks provide a good example. They are a "sleeping beauty", as the Dutch Government candidly admitted in its National Action Program on the

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1   *New York Times Magazine*, May 1, 1994.
2   Valance, I., (Chairman British Telecommunications plc), in: *Information Technology & Public Policy*, Winter 1993.

electronic superhighway.[3] The Netherlands is one of the most densely cabled countries in the world, but its networks have been restricted to the role of a mere extended antenna for broadcasting programs rather than been allowed to develop modern (interactive) services. This "artificial hibernation", as it has aptly been called, came about not so much by technological restraints as by restrictive regulation, more precisely by the impact on cable regulators of the cumulative interests of the (now Royal) Dutch PTT-Telecom and the broadcasting establishment — both themselves sectors that know a thing or two about legal protectionism.

Now, the Dutch Government has put "energetic implementation of a program for the liberalization of the telecommunications infrastructure" and "the rapid loosening of unnecessary statutory restrictions on electronic services" on top of its agenda for the electronic highway. These topics alone make for some tough decisions. New concentrations of multimedia power emerge. It is not clear how governments are going to keep them in check. In networks, the classic, regulatory watershed between "carrier" and "content" is being blurred, with great potential consequences for the citizen/consumer. Cable systems in the Netherlands are not subject to Open Network Provisions, local governments being expected to assure openness. As cable networks are being sold off to commercial interests, the need of a charter arises.

As the government recognizes in its White Paper, there is more to the multimedia society than liberalization alone. It identifies some formidable "social dilemmas":

- The increasing interconnectivity of information systems is hard to reconcile with the protection of personal privacy. How to defend the individual against "matching", "front-end verification" and "computer profiling"? Or, for that matter, what are the safeguards against electronic "redlining" (the "automatic" exclusion of certain categories of consumers) or "blacklisting" of individuals?

- The protection of vested interests of information suppliers clashes with the access rights of the market as such, of consumers, and of "culture" in general. This is a double challenge. The absolute and exclusive character of copyright is coming under fire from the propagators of a cyberspace based on "sharing". Furthermore, data controllers in the public sector, but increasingly also in the private sector, will be confronted with claims that restricted information in their keeping should really belong to the public domain.

- Modern information systems increasingly rely on data encryption techniques that are virtually unbreakable — which is exactly the reason why governments claim some sort of key to these techniques in the interest of tracking criminals and terrorists. But can encryption keys really be shared?

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3   *National Action Program Electronic Highways: From Metaphor to Action* (Summary in English), full text in Dutch: *Kamerstukken II*, 1994-1995, 23 900, No. 20 and at URL: http://www.nic.surfnet.nl/nap/.

• Last but not least, there is concern about the emerging of a societal divide between information "haves" and "have-nots".

An answer to this last dilemma might be found in the principle of "universal service" — securing basic services to all members of the public, regardless of location or status — as was called for by a special meeting on the Global Information Infrastructure (GII) by the G7 Group of main industrial nations in Brussels. Establishing a standard, however, is elusive. Perhaps no other regulatory goal has been so extensively discussed without an established definition as the concept of universal service.

At the final press conference of the Brussels meeting it was acknowledged that 'while all participants acknowledge universal service is a major concern, it remains an open question'.[4] A major reason for this lack of action seems to be the delicate relationship between government and industry. The G7 meeting made it clear that private, not public money will have to serve as funds for the GII as well as for most of the services to be carried on it. Industry regards deregulation as both its incentive and its reward for building the GII. This does not help formulating a regulatory standard for universal service — or for some of the other social dilemmas associated with the electronic highway.

Many legal concepts will have to be rethought in digital terms. For example, it has been pointed out that the established notion of libel may be turned upside down. Or, more precisely: libel plaintiffs may be turned into "public figures", characterized in (American) legal doctrine as "those who have ready access to mass media of communication". They also have, because of their status, limited recourse to the courts. Assuming that the matter of universal service is settled satisfactorily, a cyber-plaintiff has an immediate and effective way to rebut defamatory statements by answering them through the same medium in which they were originally published. Technology in this instance gives the plaintiff a guaranteed access to the relevant "media" for reply.[5]

Obviously, it is also necessary to rethink traditional data protection law, which historically has been the focus of the issue of normative quality. There are at least three pitfalls.

A first thing to avoid is the "fallacy of systems security", as illustrated by the ongoing debate on encryption. From a rather arcane issue for military specialists, encryption has been propelled into an everyday concern for countless users of electronic data processing. Incidentally, it is significant that these feel so strongly about protecting their communications right at the time when their leaders are promoting the electronic highway as a technology of freedom.

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4   Berendt, A., 'Universal service: What is it, and how?', *Intermedia*, April/May 1995, p. 42.
5   Hardy, T., 'The Proper Legal Regime for "Cyberspace"', *Pittsburg Law Review*, Summer 1994, p. 993.

One of the most popular encryption programs is called PGP, Pretty Good Privacy. This name is misleading, however. The concept of systems and data security should not be confused with the concept of personal privacy. Security is the defense of systems or data against *un*intended use, be it fire or a break-in or a software bug. In this framework the intended use is a given. Typical for the concept of privacy is that it raises doubts concerning these intentions. Is the need for a particular form of personal information serious enough to warrant its collection? Are there no alternative methods for meeting the need?

System developers like to pretend that this kind of issues may be covered by technical and organizational protection measures, such as encryption. But security is only *one* of the data protection principles that have been internationally established by the OECD Guidelines of 1980 and the Council of Europe Dataprotection Convention of 1981. In other words, a very secure, well-protected system may turn out to be only a privacy "straitjacket" if substantive issues are ignored.

A second pitfall might be called the "administrative fallacy", the reliance on regulation and administrative systems for data protection. This has promoted a view of data protection as a formal mechanism. Data controllers tend to assume that they protect privacy as long as they have filled in the proper forms and have been properly registered. Data protection agencies have — in Herbert Burkert's memorable phrase — become "administrators of symbolism".[6]

As an alternative, a more individual (civil law) and court-oriented approach has been advocated. But experience gives pause for thought: individual privacy rights (access, correction, damages) so far have not worked out very well either. Faced with the many-headed Hydra of modern networking technology the lone individual may well be reduced to the old condition of "persona miserabilis". In addition to individual rights, this calls for a whole new type of systems design, for which the Germans, as so often, have a great adjective: *bürgerfreundlich* (friendly to the citizen).

This leads to the third, and perhaps most important, fallacy: equating the rights and freedoms of citizens in cyberspace with privacy. The privacy concept is focused on "the right to be left alone" — the absence of certain information about us with others. But individuals need more: active control over the use that is made of their personal data and a certain "equality of arms" in their transactions with sophisticated systems.

Openness is the key. If a television screen were a two-way street, Big Brother would have a hard time, Brenda Maddox once wrote.[7] A multimedia society precisely

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6   Burkert, H., 'The Temptations of Data Protection', (Paper presented at the celebration of the 20th anniversary of the Data Inspection Board, Stockholm, October 1993), *Transnational Data and Communications Report*, May/June 1994, p. 20.

7   Maddox, B., *Beyond Babel: New Directions in Communications*, London, 1972, p. 252: 'Big Brother wants to watch everybody; he doesn't want them to watch him. If television sets had a two-way transmission and were connected to a switched network, he would not have an easy life at all.'

arouses such an expectation, namely, the expectation that information systems can be used by individuals on their own terms — and not only those of the data controllers. Specific applications, for a start, would involve access, the individual right in which privacy and freedom of information meet. The data protection principle of transparency has a natural complement in the transparency of decision-making structures:

● directories and route maps to find one's way to the center of decision-making systems;

● techniques of "profiling" to identify the best possible outcomes for the individual. These are only a few possible applications of the principle of *Informationsgleichgewicht*, as it has aptly been called in Germany. Originally, this principle was only intended for the informational relations between parliament and the executive,[8] but by nature it also lends itself to be applied to the relations between the citizen and the state — or even major private institutions, whose decisions may have serious effects on the lives of individuals. It is only fair to say, however, that this important principle has been rather "left alone", to borrow a term from the privacy book.

This brings us back to the normative vacuum in which the electronic superhighway must find its course. 'It is not reasonable to demand a detailed regulatory blueprint for an industry that does not exist', *The Economist* protested in an editorial on the multimedia society.[9] But this cannot be an excuse for inaction. Elaborate rules for a "virtual democracy" may yet be some distance away — as is this particular application. The great constitutional principles, however, are in place, and of proven quality. They should be 'read through technological transparent lenses'.[10]

Among all the virtual hype the individual is left with a very real concern: 'Will I run the system or will the system run me?' It is not a bad question. It could even be a fatal one.

Amsterdam, May 1995
Frank Kuitenbrouwer

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8   See Article 24(2) of the Data Protection Act of the State of Hesse (1986); German text in: Dammann, U. and S. Simitis, *Bundesdatenschutzgesetz (BDSG) mit Landesdatenschutzgesetzen und Internationalen Vorschriften* (5th ed.), Baden-Baden, 1991.

9   'Multimediators', *The Economist*, April 16, 1994.

10   Tribe, L.H., 'The Constitution in Cyberspace', *The Humanist*, September/October 1991, p. 15.

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1. EMERGING ELECTRONIC HIGHWAYS: INTRODUCTION

V.J.J.M. BEKKERS, J. NOUWT, AND B.J. KOOPS[*]

This book is published on the occasion of a conference on the political and legal implications of electronic highways, organized by the Center for Law and Informatization of the Schoordijk Institute at Tilburg University (the Netherlands) on December 12, 1995. Both the conference and the initiative to publish this book are the result of the Center for Law and Informatization's attention to the legal, political, and administrative aspects of informatization in public administration and in society on the whole. The amount of attention paid at various levels to the rise of electronic highways, together with the uncertainty of the possible consequences this may have on politics, public administration, and law, gave solid cause for a conference and a book.

On December 21, 1993, the Vice President of the United States of America, Al Gore, introduced the metaphor *information highways*, in his address to the National Press Club. Since then, the metaphor has become widely used all over the world to denote the world-wide development of a global information infrastructure. In his remarks, Gore stated that four major components would appear on this new information marketplace: the owners of the highways, the makers of information appliances, the information providers and the information customers. To provide the principles shaping that market, Gore announced legislative and administrative proposals which he outlined in more detail on January 11, 1994 in Los Angeles at Royce Hall, UCLA. These proposals concerned the most pressing telecommunications issues and were based on five principles: encourage private investment, provide and protect competition, provide open access to the network, take action to avoid creating a society of information "haves" and "have-nots", and, finally, encourage flexible and responsive governmental action.

At the same time, the European Commission's White Paper *Growth, Competitiveness, Employment — The challenge and ways forward into the 21st century* acknowledged the importance of the "digital revolution" as critical to the future of European society. The European Council at its December 1993 meeting gave full political support to the White Paper and requested that a report be prepared on the information society by a group of prominent persons who would provide concrete

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recommendations for action. This led to the report *Europe and the global information society — Recommendations to the European Council*, also known as the "Bangemann Report"[1]. The report stressed the need for accelerating the liberalization process and the achievement and the preservation of universal service and the Internal Market principles of free movement. Public authorities should set new "rules of the game", control their implementation, and launch public-interest initiatives, while the private sector should primarily be responsible for the deployment and financing of an information infrastructure. At a Community level, in addition to taking legislative initiatives, it would be necessary to target available resources to contribute more to the new objectives. The High-Level Group expressed the expectation that the information society can bring about:

- *for Europe's citizens and consumers*: a more caring European society with a significantly higher quality of life and a wider choice of services and entertainment;
- *for content creators*: new ways to exercise their creativity as the information society calls into being new products and services;
- *for Europe's regions*: new opportunities to express their cultural traditions and identities and, for those standing on the geographical periphery of the Union, minimizing their distance and remoteness;
- *for governments and administrations*: more efficient, transparent, and responsive public services, closer to the citizen and at lower cost;
- *for European business and small and medium-sized enterprises*: more effective management and organization, access to training and other services, data links with customers and suppliers generating greater competitiveness;
- *for Europe's telecommunications operators*: the capacity to supply an ever wider range of new high value-added services;
- *for the equipment and software suppliers and the computer and consumer electronics industries*: new and strongly growing markets for their products at home and abroad.

The European Council accepted the conclusions of the Bangemann Report at its meeting in Corfu on June 24-25, 1994. The European Council further invited the Council and the European Parliament to adopt measures proposed earlier by the Commission and invited the Commission to establish a work program for the remaining measures needed at the Community level. In its *Action Plan*[2], the European Commission presented an overview of the work program for the information society. It covers four areas:

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1   Brussels, May 26, 1994. The High-Level Group on the Information Society was presided by Martin Bangemann. Among the members were Carlo de Benedetti, Gaston Thorn, Hans-Olaf Henkel, Anders Knutsen, and Jan Timmer.

2   *Europe's Way to the Information Society. An Action Plan*, Communication from the Commission to the Council and the European Parliament and to the Economic and Social Committee and the Committee of Regions, COM(94) 347 final, Brussels, July 19, 1994.

- the regulatory and legal framework, for which new proposals will be made, in particular regarding telecommunications infrastructure and services, the protection of intellectual property rights and privacy, media concentration, as well as updating the "rules of the game" for free movement of TV broadcasting within the Community;
- networks, basic services, applications, and content, where there is a need to bring the parties concerned together in order to stimulate the development of applications in the areas proposed by the High-Level Group and endorsed by the European Council;
- social, societal, and cultural aspects, including the linguistic and cultural dimensions of the information society stressed by the European Council; and
- promotion of the information society in order to increase public awareness and support. The Commission invites the Council and the European Parliament, as well as the Social and Economic Committee and the Committee of Regions, to debate the issues and give political backing to the development of this action plan.

Further proposals were made by the Commission of the European Communities in its INFO2000 program[3] to stimulate the development and to encourage the use of multimedia content in Europe. To mitigate some of the existing drawbacks, like higher telecommunications costs in Europe and the fact that the European multimedia market lags behind the US by three to five years, Europe must act quickly and vigorously to ensure favorable conditions for the development of its content industry and to foster its global competitiveness. The INFO2000 program complements the important steps already taken by the European Union to create the preconditions for a thriving content industry, such as the liberalization of telecommunications networks and services by January 1, 1998, the creation of a regulatory framework to ensure the protection of rights and people, and the research and technological development which is being supported in the Fourth Framework Programme. The INFO2000 program is trying to stimulate the emerging multimedia content industry to recognize and exploit which new business opportunities will be created. It focuses on the transition from print to electronic publishing and on the emerging interactive multimedia services.

Several EU member states, like Denmark and the Netherlands, have reacted on the American and European initiatives with regard to the information infrastructure by creating their own national action plans. In its National Action Program *Electronic Highways: From Metaphor to Action*,[4] the Dutch government presented a national

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3   *Communication from the Commission to the European Parliament and the Council concerning a multi-annual Community programme to stimulate the development of a European multimedia content industry and to encourage the use of multimedia content in the emerging information society (INFO2000) and a Proposal for a Council Decision*, Brussels, June 30, 1995, COM(95) 149 final, 95/0156 (CNS).

4   *Elektronische Snelwegen: Van Metafoor naar Actie,* presented by the Dutch government to the Dutch parliament on December 21, 1994, *Kamerstukken II*, 1994-1995, 23 900, No. 20.

elaboration of the Bangemann Report. A national effort seemed justifiable because of the great importance for the creation of new economic activities, and high-grade employment, and because of the societal and cultural impact. Besides the private sector, there is also the public sector, for which the authorities have special responsibilities. The very existence of the public sector originates from civil rights, such as the right to freedom of information and communication, the right to private life or privacy, and the right to orderly rules to be drawn up by the government for societal and commercial activities. According to the Dutch government, the interactivity and high-volume of data traffic in general require a regauging and widening of political attention for the information policy and for new rights and duties on the electronic superhighway.

The Dutch government wants to strengthen the Netherlands' position of "gateway to Europe" by utilizing information as a source of high-grade economic activities. In view of the existing technological infrastructure, highly educated professionals, and the traditionally existing strength in process-oriented logistic and financial service industries, the Netherlands seems to have a favorable starting position. In stimulating the process of emerging electronic highways, the Dutch government considers the following as its main tasks:

- assuring broad access to communication media and rich, pluriform information resources for society on the whole. This finds expression in information-supplying and education policy as well as in a high level and a variety of programs by a strong and recognizable public broadcasting;
- allowing the private sector to invest in networks and services by liberalization and, where possible, by deregulation of markets for telecommunications and electronic media;
- creating a new framework for (self-)regulation to establish clear legal conditions for paperless information, e.g., for intellectual property rights and for the protection of information privacy;
- organizing the position of the public sector as a large-scale consumer of information systems and telecommunications services in such a way that it stimulates and guides the development of electronic highways;
- strengthening the knowledge infrastructure;
- initiating a limited amount of pilot projects in the private and public sector to start up and participate in the development of electronic highways.

This book describes some possibilities and pitfalls of electronic highways that challenge politics and law. It takes into account the three levels at which initiatives have been taken to shape the establishment of electronic highways. The authors start from a national (Dutch) perspective, but incorporate European and global information infrastructure developments. The authors regularly refer to Dutch sources in order to illustrate the issues at stake, which are fundamentally international issues.

In editing, we have tried to establish some uniformity of terms like "information highway", "global information infrastructure", "data highway", "electronic highway", "superhighway", "cyberspace", etc. We decided to use "electronic highways" as the minimal medium for transmitting electronic data, i.e., a single network or infrastructure, and we refer to the national, European, American, or global information infrastructure, i.e., the network connecting all kinds of local networks, as the "electronic superhighway". We want to stress that "electronic superhighway" and "Internet" do not indicate the same. We regard the Internet as a precursor of the electronic superhighway; it does dispose of many of the applications that will be offered by the electronic *super*highway. In our opinion, the electronic superhighway is a synonym for the global information infrastructure that will eventually emerge from the interconnection ("e-merging") of all existing electronic networks.

The first part of this book concerns the challenges of emerging electronic highways to politics and public administration. In Chapter 2, Victor Bekkers describes the major policy initiatives in the United States, the report of the Bangemann committee, and the Dutch initiative. He concentrates on potential deadlock situations in developing and deploying the electronic superhighway which occur as the result of winning and losing parties following their own interests. Paul Frissen focuses, in Chapter 3, on what electronic highways and developments in information and communication technologies mean to the structure of public administration in general.

Paul Depla, Kees Schalken, and Pieter Tops have contributed two chapters. In Chapter 4, they concentrate on the use of information and communication technologies in the process of political and administrative renewal during the past five years in the Netherlands. In Chapter 5, they look more closely into the technology itself to see what possibilities it creates for democracy and politics with respect to information exchange, direct communication, public discussion, and the support of internal decision making. In Chapter 6, Ivan Horrocks and Stavros Zouridis make a comparative analysis of the rationale for the recent development and operation of electronic public information systems in England and the Netherlands, in order to start exploring the ways in which these systems might relate to the wider agenda of government and public services in the information age. Marcel Thaens, Paul van Selms, and Mark Wegman look in Chapter 7 at one of the most promising technologies of this moment: interactive multimedia. The question they discuss is whether — and under which conditions — interactive multimedia is suitable for use within the public sector.

In the second part, several of the principal legal challenges of electronic highways are discussed. In Chapter 8, Wim Voermans focuses on the significance of the telecommunications infrastructure for the development of the electronic superhighway in the Netherlands. He also explores some related societal and economic interests, which give rise to fundamental political and legal questions on how to administer,

support, and control the telecommunications infrastructure in the future. In Chapter 9, Sjaak Nouwt and Hadeline Vorselaars discuss the question how the individual's informational privacy in "cyberspace" can be protected in a European context, taking the development of a global information infrastructure into account. Bert-Jaap Koops, in Chapter 10, deals with the dilemma of providing cryptographic security on electronic highways without disproportionately threatening criminal investigation. The option of electronic contracts or E-contracts is investigated by Corien Prins in Chapter 11. She briefly examines several aspects related to on-line contracting in an interconnected society without traditional national boundaries. Willem van Boom and Sjef van Erp in Chapter 12 take a look at the Internet as a case study for tracing possible and important liability questions that may arise from the use of the electronic superhighway. They attempt to develop an approach by which these questions can be dealt with in the view of the specific nature of a worldwide information flow, which in essence, the Internet is. Finally, Harry Maathuis in Chapter 13 investigates to what extent the rise of electronic highways implies the end of taxation; after all, transactions will be extremely swift and virtually untraceable as to its source, so that commissioners will not be able to verify even part of the accounted value gained in the exchange of information, services, or goods.

We end with an epilogue in which we highlight the legal and administrative implications of the emerging electronic highways and set out some current political and legal developments that, in our opinion, should be dealt with when paving the way for the electronic superhighway.

PART I

NEW CHALLENGES FOR POLITICS AND PUBLIC ADMINISTRATION