APPENDIX 17. AN INVITED RETROSPECTIVE APPRAISAL OF THE 1982 NCLIS PUBLIC SECTOR/PRIVATE SECTOR TASK FORCE REPORT

> **Note:** NCLIS invited Professor Emeritus Robert M. Hayes, who chaired the 1982 NCLIS Public Sector/Private Sector Task Force, to look back at the findings, conclusions, and recommendations made by his Task Force in the light of very dramatic interim developments. Most importantly, the impacts of the World Wide Web and the Internet are widely acknowledged to be nothing less than revolutionary. He was asked to assess whether or not those interim events, and the increasingly Web-based information handling environment, change in any significant way, in his view, those 1982 findings and recommendations. This is his report.
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> NCLIS is republishing the 1982 report because of its enduring and timely value, and a limited number of copies will be available to study participants.

Written by Robert M. Hayes, Professor Emeritus, Department of Library and Information Science, University of California, Los Angeles (UCLA); Chairperson of the NCLIS Public Sector/Private Sector Task Force; and Member, NCLIS Group of Experts for This Assessment

THE PRIMARY ISSUES[9]

The Report of the NCLIS Public Sector/Private Sector Task Force identified two primary issues:

1. The crucial importance of information resources, products, and services in our economy and society.
2. The conflicting views concerning the proper role of government in providing those information resources, products, and services.

Everything that has happened in the twenty years since that Report has, without question, confirmed the first issue. With respect to the second issue, probably there continue to be conflicting views concerning the "proper role of government", but I think the focus of that issue has shifted as the political context has shifted and repeatedly has done so. In that respect, the technological developments may affect the focus of attention but do not change the fundamental debate.

THE PRINCIPLES

The Report presented a set of seven principles:

> Principle 1. The Federal government should take a leadership role in creating a framework that would facilitate the development and foster the use of information products and services.

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[9] Available at http://www.nclis.gov/govt/assess/assess.appen17.pdf. This appendix was last revised on August 15, 2000.

The "leadership" is perhaps best represented by the development of the Internet. I think everyone will agree that it was a direct result of U.S. governmental investment in creating the basic structure, through ARPANET and the NSF super-computer network. It must be said that the pace in explosion of the Internet during the 90s, from the rather limited and essentially academic growth of the late 80s (which was exponential, yes, but nothing like we have experienced) to the current rate of commercial growth has been almost unbelievable.

Among the important policy decisions by the federal government which clearly has fostered the development and use of *electronic* information products and services was the Telecommunications Act and its provisions to subsidize telecommunications access for the nation's libraries, educational institutions, and health delivery agencies. Equity of access, so that geographic location and economic status are not insurmountable barriers, has been made a matter of government policy

But there has been another arena in which the U.S. government has taken a position of leadership that in some respects is of even more fundamental importance. It is in the replacement of the SIC code for classification of industry data to the NAICS at least in part in recognition of the growing importance of the "information sector" of the economy. By doing so, the federal government has provided real encouragement to investment because now the data will more clearly show the magnitude of that investment and the effect of it on the economy.

In the same vein, though slightly different in the nature of its leadership role is the policy position of the federal government with respect to capitalizing information investments. In a Los Angeles Times article of Friday, October 29, 1999, it was reported that, "As part of its periodic update of its methods, the Commerce Department redefined software as an investment, something of value in its own right and thus counting toward economic output." It went on to say, "For last year alone, the refiguring added about $250 billion to estimates of total economic output. Fully two-thirds of that was due to the redefinition of software." Now, that is getting somewhere! Later, I will comment further on the broader implications of this kind of policy. My hope (as I will try to identify) is that this principle of support to investment will be extended to other than simply investment in software.

> Principle 2. The Federal government should establish and enforce policies and procedures that encourage, and do not discourage, investment by the private sector in the development and use of information products and services.

This principle is certainly reflected in the example of federal policy with respect to information investment already alluded to above. By stating, as a policy, that investment in "information resources, products, and services" should be treated precisely that way, as an investment, the federal government, at least in principle, is encouraging and not discouraging such investment. It is certainly a most tangible means of doing so.

> Principle 3. The Federal government should not provide information products and services in commerce except when there are compelling reasons to do so, and then only when it protects the private sector's every opportunity to assume the function(s) commercially.

> The related recommendations are to be considered as integral parts of this principle, since they embody the procedures for determining that there indeed are "compelling reasons" for the government to provide services in commerce:

In my view, this principle is among the most important contributions of the PS/PS Task Force Report. The federal government should not put itself in the position of commercial information distribution but should leave that to the private sector, "unless there are compelling reasons for it to do so". One clear

example of a compelling reason is the nation's health, and the Congressional mandate that NLM should engage in active distribution of medical-related information is consistent with that principle. Furthermore, it in no way precludes the private sector from adding value to NLM information products, and I personally know of many companies that have done just that.

Looking at that principle in the context of developments in the two decades since the PS/PS Task Force Report, one of the most remarkable things that happened during the 1980s was the *President's Private Sector Survey on Cost Control* (the "Grace Commission"). For some strange, unaccountable reason, it adopted the position that the federal government **should** actively get into commercial activities, in every area of government, as the means for funding government operations and with the identified objective to replace taxation as the source of funding, in fact. I cannot conceive of anything that would be more destructive of the private sector than for the government to "get into the business" of doing anything.

Leaving that bit of history aside, though, have the technological developments of the past twenty years changed the first part of this principle in any way? Clearly not. If anything, they have made it easier for the government to conform to the intent of the principle. There are now many means, through the Internet especially, for the private sector to fill the needs in regions of the country and for groups of persons that might not in the past been well served without government intervention in the marketplace.

In this respect, I return to the leadership of the federal government in the policy of equitable access to telecommunications, as embodied in the Telecommunications Act and its provisions to subsidize the nation's libraries, educational institutions, and health care delivery agencies in access to basic telecommunications services, the Internet being simply one example. Such subsidy clearly makes it feasible for the private sector to meet needs at prices that can be afforded.

Having said all of that, I suspect that this principle may underlie some of the current concerns of NCLIS. The role of agencies such as NTIS become ambivalent when viewed in the context of this principle. Might not the activities of NTIS be better performed by private sector companies? The problem is that, without NTIS, the basis for private sector entry would become so marginal as to preclude investment by any company. It would simply be too difficult for any private sector company to perform the role of NTIS in assembly of the basic data. That role for NTIS is necessary for governmental management of the results of its programs and for distribution of them for governmental purposes. Therefore, in my view continuation of NTIS in that role is totally consistent with this principle.

The ambivalence appears when the role of NTIS in *distribution* becomes important. Now, that ambivalence was present during the PS/PS Task Force discussions, with specific reference to NTIS, which were at a time when electronic distribution via the Internet was discussed as feasible but had not assumed the importance it now has. Assuming NTIS were to continue in its role as the central manager of access to governmental scientific and technical report, should it play a role in distribution? In my personal view, clearly YES, in the same way that the Department of Commerce distributes *Statistical Abstract of the United States.* But the objective in doing so should be to make the government information readily available to all who want access to it (such as individuals, like me). But beyond that, the objective is to encourage private sector companies to add value to those data, by re-packaging, by producing products that are tailored to specific markets, etc.

The point as far as the PS/PS Task Force was concerned, though, is that two groups of institutions (libraries and private sector information agencies), taken together, provide the best means for ensuring

public access to government information. On the one hand, use of libraries, especially public and academic libraries, ensures that "ability to pay" does not raise barriers which effectively deny access to information. On the other hand, the use of private sector organizations, in the business of providing information services, ensures that individual freedom and initiative will be dedicated to developing and marketing a multiplicity of information services whose value is determined by the purchasers rather than by government. The principles and recommendations emphasize the importance of using this balance of means for access, in contrast to creating new agencies to do so. Everything that has happened for the past twenty years, with respect to technological developments in particular, confirms that this combination indeed is effective.

> Principle 4. The Federal government, when it uses, reproduces, or distributes information available from the private sector as part of an information resource, product, or service, must assure that the property rights of the private sector sources are adequately protected.

The problem with which this principle was intended to deal was the potential that private sector data might, inadvertently or perhaps even by design, become incorporated into governmentally supplied information with the result that the property rights might be diluted.

Among all of the principles (at least among those I've reviewed to this point), this may be the one that has been most affected by technological developments over the past twenty years. One need merely look at the controversy over Napster to see the problem. I don't think effects of technology change the intent of the principle, but they certainly complicate the reality. The potential for *inadvertent* inclusion of electronic material under copyright is very real.

The problem, though, should not arise if we are dealing with *deliberate use* of copyrighted material. I know that in non-governmental contexts, responsible agencies, such as libraries, are very aware of the necessity of protecting private rights. As the nation's libraries advance in the development of "digital libraries", they are doing so with the utmost care with respect to private rights. I think the principle continues to be valid as a warning to federal agencies that they should operate with equal attention to individual rights.

> Principle 5. The Federal government should make governmentally distributable information openly available in readily reproducible form, without any constraints on subsequent use.

With respect to Principle 5, the U.S. federal government is now actively distributing "information from government activities" through the Internet as well as through CD-ROMs. Census for the year 2000, for example, may well be distributed primarily in electronic form, with print serving only archival purposes. (See "U.S. counting on Web to be census source; Bureau plans to post most of its 2000 enumeration data on the Internet. Switch from paper to hypertext raises information issues", Los Angeles Times, Sunday, November 15, 1998, Home Edition, Section A.) The Library of Congress has launched an extensive means for access to its collections and activities. The ERIC system is now actively disseminating its materials through the Internet. The Department of Commerce distributes Statistical Abstract of the United States both online through the Internet and on CD-ROM. I could go on and on but the point is clear. This principle has been heartily endorsed by reality if not by policy.

> Principle 6. The Federal government should set pricing policies for distributing information products or services that reflect the true cost of access and/or reproduction, any specific prices to be subject to review by an independent authority.

This principle is also of exceptional importance. To be specific, the intent was not only that the price should "reflect the true costs for access and/or reproduction" but more to the point that it should *not* be

set to recover the costs in producing or assembling the information. Now, I must record that I am expressing my own understanding, my own interpretation, and my own views. There may well have been members of the PS/PS Task Force that were ready or even desired to have the price set at "market". But the wording was based on the view that the price should be set to cover only the costs of making the information available.

> Principle 7. The Federal government should actively use existing mechanisms, such as the libraries of the country, as primary channels for making governmentally distributable information available to the public.

I suspect that this principle may be another part of the reason for the current concerns of the NCLIS. The particular example that the PS/PS Task Force had in mind was the Depository Library program, in fact. I think there have been attempts to eliminate that program, and to do so would be totally counter to the intent of this principle.

THE RECOMMENDATIONS

The Report presented a set of twenty-seven recommendations

> Recommendation #1. Provide an environment that will enhance the competitive forces of the private sector, so that the market mechanisms can be effective in allocating resources in the use of information and in directing innovation into market determined areas.

Everything I have seen, at least for the decade of the 90s, confirm the picture of a thriving competitive, private, market-based sector for the information economy. Federal policies clearly have been effective in every respect, including increasing use of information and innovation in development of products.

> Recommendation #2. Affirm the applicability of the First Amendment to information products and services.

Clearly, the Internet has raised many First Amendment issues. Congressional efforts to impose means for censorship were stopped by the courts based on First Amendment arguments. The view of the PS/PS Task Force was precisely that the First Amendment should not be limited to "the press" (taken in some limited sense) but should encompass other means for information distribution, such as the Internet (which was explicit in the discussions). As an ardent believer in the importance of First Amendment imperatives, I continue to endorse this principle.

> Recommendation #3. Encourage Congress to be consistent in the language used and in the application of principles relating to information products and services, such as those identified in this Report, when it formulates legislation and when it exercises its oversight role.

Frankly, I do not recall the precise reasons that the PS/PS Task Force considered this to be worthy of recommendation. Looking at it now, it really is "preaching", and I would be inclined to eliminate it.

> Recommendation #4. Encourage government agencies to utilize the most efficient (information) technologies.

This too is "preaching", this time to the Executive Branch. I think that the PS/PS Task Force objective was to urge that those agencies should be in the forefront of *use* of the information technologies and not simply in the *support to development* of them. Again, I would be inclined to eliminate it.

> Recommendation #5. Encourage the setting and use of voluntary standards that will not inhibit the further development of innovative information products and services.

The debate in the PS/PS Task Force on this topic was intense. Standards were viewed with great ambivalence. On the one hand, clearly they foster development by creating a framework on which products can be inter-related without concern about compatibility. On the other hand, they can also restrict creativity. The intent of this recommendation was to identify the balance between these two concerns but to do so in a way that, if anything, put greater emphasis on setting standards. Has this changed by the technological developments of the past twenty years? I think not. The balance still must be maintained but standards still are the means by which products can be inter-related.

> Recommendation #6. Encourage and support educational programs that provide the professional skills needed to further the development and use of information as an economic and social resource.

It is clear that this recommendation continues to have dramatic importance. From all of the reports from the information industries, there is a shortage of qualified persons for employment. The recent expansion of the basis for hiring foreign workers with technological skills clearly is based on the perception that there are needs that are not being met. Beyond that, there are needs is preparing managers in the use of information resources.

> Recommendation #7. Encourage and support both basic and applied research in library and information science.

I suppose that this recommendation were blatantly self-serving, but I think it is consistent with Recommendation #6. The facts are that financial support for research in the specific arena of "library and information science" has declined in the past two decades, and I think the loss is a serious problem.

> Recommendation #8. Encourage and support statistical programs and related research to provide the data needed to deal with information policy issues.

I think that the shift from SIC to NAICS coding represents *exactly* what the PS/PS Task Force had in mind. Prior statistics have grievously under-estimated the magnitude of the information sector of the economy, and by doing so have meant that policy decisions in both the legislative and executive branches have been based on inaccurate picture of the effect of those policies. Now, while the current statistical programs have made some steps in the direction of improved reporting, there is still much that needs to be done. To me, this is therefore one of the most important recommendations.

> Recommendation #9. Conduct a periodic economic assessment of the impact of Federal government information products and services.

> Recommendation #10. Encourage Federal agencies to regard the dissemination of information, especially through the mechanisms of the private sector (both for profit and not for profit), as a high priority responsibility.

I think that these recommendations are valid and even self-evident.

Recommendation #11. Identify and evaluate alternatives to existing Federal information dissemination mechanisms.

Recommendation #12. Develop and support the use of libraries as active means for access to governmental information by the public.

As are these.

Recommendation #13. Identify and eliminate legal and regulatory barriers to the introduction of new information products and services.

Frankly, I'm not sure what barriers the PS/PS Task Force had in mind in making this recommendation. But an example that comes to mind is the change in policy concerning *capitalization of software.* In my view that should be extended to other kinds of information investments (such as in databases). Now, these may not represent "barriers" so much as accounting policies that in the past treated investments in information as parts of "goodwill" in assessing the value of companies. By doing so, they in effect debased the currency for measuring the return on such investments. There may be other examples that can be brought to mind. But whether so or not, I think this recommendation still has value. In fact, I would put greater stress upon the issue of proper evaluation of investment in "intangibles" such as "information", as my illustration here are intended to highlight.

In passing, I want to comment on one of the debates that occurred during the discussions of the PS/PS Task Force. It concerned whether "information" should be regarded as a "resource" and as a "capital investment". My view was that it clearly was a resource and an investment, at the least for companies in the information industries. But there were some on the Task Force who vociferously argued against that position, claiming that to do so would give it too much importance. They said, in so many words, "Information is a support to decision-making, not an investment." Certainly that position was correct if it was set in the context of management decision-making. But in the context of information product development, it is in my view totally incorrect. The database of an ISI or an OCLC is as much a capital investment, necessary for production of information products and services, as is a machine tool in Ford or General Motors, necessary for production of automobiles. Yet today, the information investment is always expensed but the machine tool investment is almost always capitalized.

Recommendation #14. Encourage private enterprise to "add value" to government information (i.e., to re-package it, provide further processing services, and otherwise enhance the information so that it can be sold at a profit).

Of all the recommendations, it seems to me that this one gets to the heart in resolution of the issues with which the PS/PS Task Force was concerned. Specifically, the distribution of government information by the government should not be considered as competition (assuming that the principles and recommendations in that respect are followed) but as opportunity. It provides the private sector with the opportunity to utilize that information, to develop their own products and services based on it and with the expectation that the government will continue to provide the information, not as a competitor but as a source. I continue heartily to endorse this principle.

Recommendation #15. Provide incentives to existing organizations, such as libraries and bookstores that will encourage them to expand their activities in dissemination of governmentally distributable information.

The Depository Library program represented the precise case in point for this recommendation. The point is that libraries, in particular, provide the "safety-net" for those who do not have the economic resources to pay for what can be exceptionally expensive private sector added-value services. When the general public may not be able to afford those private sector services, they should still have access to the governmental data on which those value-added services are based. It is this objective to which this recommendation refers. Now, does the Internet reduce the importance of this recommendation? I think not. If anything, it enhances it, since the library again serves as the safety net both for access to the government information and, more importantly, for access to the professional assistance in support of evaluation and use of it.

Recommendation #16. Establish procedures which will create a realistic opportunity for private sector involvement in the planning process for government information activities

Recommendation #17. Involve the private sector in the process of formulating standards relating to Federal information activities.

Recommendation #18. Create or improve mechanisms for ensuring that the actions of government agencies, in developing information resources, products, and services, are consistent with the policies, goals, and long range plans that are announced.

Recommendation #19. Announce intentions sufficiently ahead of time to provide an opportunity for private sector involvement when a government agency, for reasons it regards as compelling, should plan to develop and/or to market an information product or service.

Recommendation #20. Review and approve, before implementation, any plans for the government to develop and/or market an information product or service, the review to be carried out by an agency appropriate to the branch of government (such as OMB, GAO, CBO).

Recommendation #21. Include an "information impact and cost analysis" as part of the process of review, evaluation, and approval of any plans for the government to develop and/or to market an information product or service, the analysis to cover economic and social effects, effects on existing products and services, effects on potential private sector products and services, and benefits to the public.

Recommendation #22. Review periodically to evaluate the desirability of continuation of any information product or service as a governmental activity.

Recommendation #23. Do not arbitrarily restrict the Federal government from enhancement of information products and services, even if solely to meet the needs of constituencies outside the government itself.

Recommendation #24. Announce the availability of governmentally distributable information and maintain one or more registers to help the public determine what governmentally distributable information is available.

Recommendation #25. Deposit governmentally distributable information, in whatever forms it may be available, at national and regional centers, including regional depository libraries, where it may be examined at no charge.

Recommendation #26. Do not assert any Federal government copyrights on information the Federal government makes domestically available.

Recommendation #27. Use the nation's libraries and non-governmental information centers as means for distribution of governmentally distributable information instead of creating new governmental units or expanding existing ones.

All of these recommendations were focused not so much on the general objectives as on the specifics of means. The private sector representatives on the PS/PS Task Force wanted to assure that their interests would be heard and listened to. They wanted to assure that procedures in making policies and in implementing programs would be as open as possible so as to make it possible for them to participate in the process. I think those aspects continue to be necessary, not only to meet the needs of private sector entrepreneurs but as a general policy of good government.

In parallel, the members of the PS/PS Task Force that represented the "public sector" in the debate wanted to assure that their interests were also recognized in areas such as equity in access, maintaining the role of libraries, assuring that the safety-nets for meeting needs continued to stay in place. In this respect, these recommendations tried to balance the two sets of interests. And I think that that too continues to be necessary.

DEFINITIONS

There were an untold number of definitions.

> In any area of controversy, the terms used in the discussion become not only means for expressing the ideas but the very focus of the conflicts themselves. It is thus necessary to develop specific definitions for the terms used, so as to assure common understanding and to clarify the conflicts. The definitions, as presented here, are not intended to be universally accepted, but the principles and recommendations must be read with them in mind.

I won't here review the array of definitions, but I do want to highlight some of them that I think continue to be critical.

> A key issue, here, was the ambiguous position of the third sector organizations (universities, libraries, research institutes, professional societies). In some situations, they are public sector institutions (public libraries and public universities, for example, are clearly part of government, in the sense that they are governmentally funded and operated), but in other contexts they function as part of the private sector. The basis for resolution of this ambiguity was never clarified, so the third sector organizations—the not-for-profit institutions and comparable activities of government—were usually treated as part of their respective sectors rather than being identified as a group separate from the other two. The fact remains, though, that the very membership of the Task Force was chosen to represent three sectors, not two.

I think that in public policy debates, certainly in the information field if not more generally, this group of institutions, which lie between the "public sector" and the "private sector" needs to be given more attention than it usually receives, as an independent set of participants and not buried in one or the other of the two. In the international arena, the NGOs (non-governmental organizations) are being explicitly recognized as necessary and independent participants, sitting between government and business. And that is precisely the group I am talking about here.

The term "information" was repeatedly used in the Task Force discussions, but it vas impossible to arrive at an agreed upon definition. It appeared and was generally understood to refer to the content or symbolic substance of a communication, as separate from the physical form in which the communication occurred. But despite the appearance of a general understanding of the term, it simply eluded specific definition.

The problem faced by the Task Force is exemplified by the definition of "information" given in the 9 June 1980 draft statement from the OMB, concerning "Improved Management and Dissemination of Federal Information: Request for Comment". In it, "information" is defined as "...publications and other documents, such as reports, studies, and brochures, which are available in a paper or microform media (sic)." That definition (in identifying "information" with the media that convey it, and with a limited set of such media at that) is irreconcilable with the usage in the Task Force.

Although the Task Force did not define "information", at least characteristics of it as an "economic entity" were explicitly recognized. I won't here review what the PS/PS Task Force report said in this respect, but I think that what was said continues to be important. It has become especially so as the information economy and the information technologies continue to expand. The economic role of information needs to be identified, and not simply in the traditional way in which the economists have treated it (i.e., simply as part of the decision-making process).

The differences between an information product and an information service were a matter of extensive debate and, in fact, seemed to exemplify rather fundamental issues in the discussion.

This distinction or rather the blurring of this distinction has become increasingly important as a result of information technology developments in the past two decades. Indeed, online publication is both a product and a service. Now, it may be that a distinction does not need to be made, but the facts are that government policies seem to treat them as different.

There was disagreement over whether the information industry should be limited to private sector organizations, thus excluding governmental agencies such as NTIS and the GPO. Those arguing that it should include government agencies and their contractors saw the term as representing a kind of function; those arguing against doing so, saw the term as representing the difference between public and private sectors, "industry" being confined to the private sector.

My own view is that the term "information industry" should be treated as a function and that "industry" is not confined to the private sector. In saying that, I must reiterate that I am not suggesting that the government (i.e., the "public sector") should get into the business of marketing its products as a source of income and in competition with the private sector. But I strongly believe that governmental information activities, as functions, should be treated on a par with private sector function, certainly in statistical accounting.

Most of the Task Force deliberations focused on the availability of "government information", but the definition of that term fluctuated widely during the discussion. At times, the term was taken very broadly, including all kinds of information generated by or collected by the government or by its contractors. At other times, the term was taken very narrowly, limited to the definition given by the OMB, in which it is restricted to mean "...for which the government is the primary user"; that usage contrasts "government information" with "public information", the latter being interpreted as '.... information to inform or educate the public".

There are many problems underlying the diversity of definitions. I won't here try to review them, as they are recounted in the PS/PS Task Force report, but each of the problems interacts with the others, and while there is some overlap among them, there are no easy ways of reducing them to a limited number of sub-categories of government information. This complicated the task of coming to agreement on several principles, since different categories of government information will almost certainly require different conditions for availability. I think that the problem in definition of the term "government information" continues.