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Department of Commerce Science and Technology Programs: Review of Dismantling Proposals in the 104th Congress

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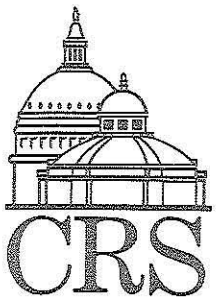

DEPARTMENT OF COMMERCE SCIENCE AND TECHNOLOGY PROGRAMS: REVIEW OF DISMANTLING PROPOSALS IN THE 104TH CONGRESS

SUMMARY

Science and technology (S&T) related agencies and programs constitute a major portion of the Department of Commerce (DOC) budget. Combined funding for the S&T agencies comprises 69% of the total DOC budget ($2.568 billion out of a total FY1997 DOC budget of $3.720 billion). These S&T agencies and programs include: the National Oceanic and Atmospheric Administration (NOAA); the National Institute of Standards and Technology (NIST); the National Telecommunications Information Administration (NTIA); the Technology Administration (TA); the Office of Air and Space Commercialization (OASC); and the National Technical Information Service (NTIS).

In the 104th Congress, several legislative initiatives sought to eliminate the Department of Commerce, thereby affecting many DOC S&T agencies, activities, and programs. Two DOC elimination bills were passed by the House (in October and November of 1995), but were not passed by the Senate. DOC dismantling proposals would have: (1) eliminated some NOAA functions (such as selected research programs and the NOAA Corps), transferred other functions (such as mapping and charting), and consolidated remaining functions into a new independent agency, the National Scientific, Oceanic, and Atmospheric Administration (NSOAA); (2) eliminated NIST's Advanced Technology Program and Manufacturing Extension Partnership, while retaining NIST core standards functions as part of NSOAA; (3) terminated NTIA grant programs, while transferring most remaining functions to the USTR; (4) terminated the Technology Administration; (5) privatized NTIS; and (6) transferred DOC's space commerce office to NSOAA.

These proposals were based on the belief that the federal government should not fund science and technology which is more appropriately sponsored by the private sector, that the federal bureaucracy must be streamlined, and that the deficit must be reduced to achieve a balanced budget. On the other hand, opponents of DOC dismantling argued that government should support technologies which are critical to U.S. competitiveness, and that eliminating DOC and transferring or consolidating remaining programs would be needlessly expensive and disruptive.

Many of the objectives of dismantling proposals were pursued by Congress during the appropriations process. While none of the DOC S&T agencies or programs were eliminated in FY1996, most received significant cuts in funding from FY1995 levels (averaging about 7% overall). For FY1997, the Administration and Congress disagreed over further cuts for DOC S&T programs. The final FY1997 appropriation as set forth in the Omnibus Consolidated Appropriations Act (P.L. 104-208) provides an overall increase of 1% over FY1996 levels for these programs. To the extent that DOC dismantling legislation resurfaces in the 105th Congress, budget disagreements between Congress and the President, coupled with the Administration's strong opposition to all DOC dismantling proposals, suggest an uncertain fate for S&T programs in the Department of Commerce.

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Science and technology (S&T) related agencies and programs constitute a major portion of the Department of Commerce (DOC) budget. Combined funding for S&T agencies comprises 69% of the total DOC budget ($2.568 billion out of a total FY1997 DOC budget of $3.720 billion). These S&T agencies and programs include:

National Oceanic and Atmospheric Administration (NOAA) -- provides scientific, technical, and management expertise to promote safe and efficient marine and air navigation; assess the health of coastal and marine resources; monitor and predict the coastal, ocean, and global environments (including weather forecasting); and protect and manage the Nation's coastal resources.

National Institute of Standards and Technology (NIST) -- assists industry in developing technology to improve product quality, modernize manufacturing processes, ensure product reliability, and facilitate rapid commercialization of products based on new scientific discoveries.

National Telecommunications Information Administration (NTIA) -- advises the President on domestic and international telecommunications policy, manages the federal government's use of the radio frequency spectrum, provides grants for telecommunications infrastructure development, and performs research in telecommunications sciences.

Technology Administration -- includes NIST, NTIA and the Office of Technology Policy, which advocates integrated policies that seek to maximize the impact of technology on economic growth, conducts technology development and deployment programs, and disseminates technological information.

Office of Air and Space Commercialization (OASC) -- works with the private sector, other federal agencies, state, and other governmental entities to develop national policies with respect to the commercial use of space.

National Technical Information Service (NTIS) -- operates a revolving fund for payment of all expenses incurred in performing activities, including the acquisition and

public sale of domestic and foreign federally funded research, development, and engineering reports and associated business information.

Table I shows recent and current budgets of DOC S&T agencies and programs. Many of the objectives of dismantling proposals (e.g. the termination or scaling down of certain DOC programs) were pursued during the FY1996 and FY1997 appropriations processes. While none of the DOC S&T agencies or programs were eliminated in FY1996, most received significant cuts in funding from FY1995 levels. The total reduction in funding DOC S&T programs between FY1995 and FY1996 was about 7%. For FY1997, the Administration requested an increase of 20% for these programs, as compared to FY1996 levels. The Commerce, State, and Judiciary FY1997 appropriations bill (H.R. 3814, H.Rept. 104-676), passed by the House on July 24, 1996, would have decreased appropriations for these programs by 9% from FY1996 levels. Levels recommended by the Senate Appropriations Committee (S.Rept. 104-353) would have decreased these appropriations by 2%. However, the final FY1997 appropriation as set forth in the Omnibus Consolidated Appropriations Act (P.L. 104-208) provides an increase of 1% over FY1996 levels for DOC S&T programs.

Table I: FY1995-FY1997 Appropriations, DOC S&T Agencies ($ millions)

Agency	FY1995	FY1996	FY1997 P.L. 104-208
National Oceanic and Atmospheric Administration (NOAA)	1912	1853	1919
National Institute of Standards and Technology (NIST)	700	620	588
National Telecommunications and Information Administration (NTIA)	97	54	52
Technology Administration	8	7	9
National Technical Information Service (NTIS)	7	0[1]	0
Office of Air and Space Commercialization (OASC)	0.450	0.457	Not available
Total	2724	2534	2568

[1]NTIS operates a revolving fund for the payment of all expenses incurred in performing its activities.

DOC Dismantling Legislation in the 104th Congress[2]

The Department of Commerce Dismantling Act of 1995 (H.R. 1756) was introduced by Representative Chrysler on June 7, 1995. A virtually identical bill, S. 929, was introduced by Senator Abraham on June 15, 1995. Since that time, the legislation has undergone numerous revisions as various hearings and mark-ups were held by committees in the House and Senate. In general, the Senate proved more hesitant than the House to proceed with DOC dismantling legislation. In 1995, the House passed two pieces of legislation (the budget reconciliation and debt limit extension bills) which contained DOC dismantling provisions. In both cases, the Senate removed the DOC dismantling provisions from the bills.

In the Senate, the Committee on Governmental Affairs reported out a substitute amendment to S. 929 on October 20, 1995 (S. Rept. 104-164). The bill remained on the Senate Legislative Calendar for the duration of the 104th Congress. In the House, 11 committees having jurisdiction over various DOC programs considered H.R. 1756; subsequently, the House Government Reform and Oversight Committee reported out DOC dismantling legislation that was included as Title XVII of the House reconciliation bill, H.R. 2491. The bill was passed by the House on October 26, 1995; however, dismantling provisions were not included in the Senate bill, and were subsequently dropped by the conference report, which was ultimately vetoed by the President.

A similar but slightly modified version of the dismantling provision was approved by the House on November 9, 1995 as Title II of the Temporary Public Debt Limit Increase bill, H.R. 2586 (also not included by the Senate, dropped from the conference report, and ultimately vetoed by the President). The legislation would have:

> terminated various NOAA research programs and the NOAA Corps; transferred NOAA aeronautical mapping and charting responsibilities to the Defense Mapping Agency, coastal non-point pollution control responsibilities to the Environmental Protection Agency, and mapping, charting, and geodesy functions to the U.S. Geological Survey; and incorporated remaining NOAA functions into a newly formed independent agency, the National Scientific, Oceanic and Atmospheric Administration (NSOAA).
>
> terminated the Advanced Technology Program (ATP) and Manufacturing Extension Partnership (MEP) at NIST; renamed NIST laboratories as the National Bureau of Standards (NBS); and combined NBS with NOAA to form the National Scientific, Oceanic and Atmospheric Administration (NSOAA)
>
> terminated NTIA grant and assistance programs; privatized NTIA laboratories; transferred functions related to research and analysis of the electromagnetic spectrum to NBS; and transferred remaining functions, including federal spectrum management, to the United States Trade Representative (USTR)

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[2]For more information on DOC elimination proposals, see: U.S. Library of Congress. Congressional Research Service. Proposals to Eliminate the U.S. Department of Commerce: An Issue Overview. CRS Rept. 95-834 E, by Edward Knight. Washington, January 3, 1996. 18 p.

terminated the Technology Administration; privatized NTIS; transferred the Office of Air and Space Commercialization to NSOAA; eliminated the NIST metric program; and repealed provisions of the Metric Conversion Act (15 U.S.C. 205b) requiring federal agencies to go metric.

for the first fiscal year after DOC abolishment, capped funding for NSOAA functions at 75% of the total amount appropriated for FY1995; for the second fiscal year, cap funding at 65% of FY1995 levels

No subsequent legislation to eliminate the DOC was introduced during the remainder of the 104th Congress. While the FY1997 budget resolution (H.Con.Res. 178, H.Rept. 104-575), passed by the House on May 16, 1996, reaffirmed many of the DOC dismantling proposals found in H.R. 2586, the FY1997 Senate budget resolution (S.Con.Res. 57) did not call for DOC elimination. The Conference agreement (H.Rept. 104-612) approved by the House and Senate on June 12 and June 13, respectively, stated: "the conferees agree to disagree on the future status of the Department of Commerce; they recognize that ultimately the committees of jurisdiction will determine whether the Department is or is not terminated." By contrast, the FY1996 budget resolution (H.Con.Res. 67), which was approved by both the House and the Senate, expressed the sense of Congress that the DOC should be eliminated.

The following sections of this report provide overviews of DOC S&T agencies and programs, including: origins and missions; characteristics and possible impacts of DOC dismantling proposals; and arguments for and against elimination and/or reorganization that would be necessitated by the legislation. As mentioned above, DOC dismantling legislation underwent numerous revisions during the 104th Congress. The following agency and program overviews focus on the impacts of the most recent DOC dismantling legislation, H.R. 2586.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION[3]

NOAA's history as a government agency can be traced back to the Organic Act of 1890, which established the U.S. Weather Bureau, formerly under the War Department, in the Department of Agriculture. NOAA's most recent predecessor, the Earth Sciences Services Administration (ESSA), was established in the Department of Commerce in 1962. ESSA brought together under a single agency many federal satellite programs and scientific research related to earth science, atmosphere, oceans, climate and meteorology.

NOAA was created in 1970, under President Nixon's reorganization plan no. 4, to consolidate a number of activities being carried out throughout the Executive Branch of the federal government relating to atmospheric and oceanic sciences. The plan also strived to set an overall framework for government research in these fields. The idea for NOAA was conceived after a set of recommendations that were outlined in the 1969 Stratton Commission Report on Marine Sciences, Engineering, and Resources. The final plans for NOAA, however, did not follow the Commission's recommendations

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[3]Prepared by Wayne A. Morrissey, Science and Technology Policy Information Analyst, Science Policy Research Division.

exactly. For example, ESSA's responsibilities for mapping and charting were not transferred to the U.S. Coast Guard under the Department of Transportation; nor was NOAA established in the Interior Department, which had been envisioned for the new ocean and atmospheric agency.

Instead, NOAA remained under the Department of Commerce (DOC) assuming most of the functions of its predecessor ESSA, satellite launching functions were transferred to the National Aeronautics and Space Administration, and additional functions were assumed by NOAA relating to protection of the marine environment. The prevailing opinion within the Nixon Administration was that a new NOAA could benefit from interacting with the Commerce Department. However, the popular belief, at the time, was that philosophical differences between then Secretary of Interior and the White House affected this outcome.

NOAA is currently the largest agency in DOC, accounting for a little more than half of DOC's total budget. NOAA also receives the largest amount of funding for research and development in DOC (about 28% of NOAA's budget). NOAA's budget cuts across 5-major program activities: National Ocean Service (NOS), Oceanic and Atmospheric Research (OAR), National Marine Fisheries Service (NMFS), National Weather Service (NWS), and National Environmental Satellite, Data, and Information Services (NESDIS). These activities comprise many focused programs and others which contribute to broader federal crosscutting activities such as the U.S. Global Change Research Program, and the High Performance Computing and Communications Initiative, among others.

Program Support, a sixth budget activity, funds equipment and infrastructure for research. Collectively, these activities are grouped under the NOAA Operation, Research and Facilities account (ORF) which constitutes about 90% of NOAA's total budget. NOAA has also maintained a CORPS of commissioned officers, under Marine and Air Services, who pilot research vessels, assist in nautical charting activities, and participate in search and rescue activities. Additional funding to support research activities, more specifically that related to lab construction and maintenance, physical plant, and research vessel acquisition, are derived from non-ORF Construction and Fleet Modernization accounts.

Proposals to Reorganize NOAA

Since its creation in 1970, there have been a few attempts to reorganize operations and save money at NOAA. During 1976 through 1985, a number of proposals were put forth and legislation introduced to establish an Organic Act for NOAA.[4] Inevitably, a number of these addressed streamlining operations and cost savings as part of overall consideration.

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[4]See for example, [Committee Print] *Atmospheric Services and Research and a NOAA Organic Act*; report prepared for the Subcommittee on Natural Resources and Environment of the Committee on Science and Technology of the U.S. House of Representatives, Ninety-sixth Congress, First Session by the Science Policy Research Division, Congressional Research Service, Library of Congress. [Serial DD] 1980, Washington, GPO. 333 p.

Most notably, in 1983, Booz-Allen & Hamilton Inc. transmitted to then Associate Administrator for the Department of Commerce on Oceans and the Atmosphere, James W. Winchester, the results of a study on the organization and management at the National Weather Service (NWS).[5] The Booz-Allen study focused on defining the core mission of NWS, implementing new technology, and the possibility of privatizing a number of functions of NWS. They estimated that around $60 million (in 1982 dollars) could be saved annually, just by consolidating the number of regional field offices, which translates to about $100 million annually in 1995 dollars.

In November 1994, The Heritage Foundation reported that by dispersing various functions of NOAA throughout the federal government, and "privatizing" or eliminating many of NOAA's other remaining functions -- which they characterized as redundant -- the federal government could save over $197 million in the first year alone. According to Heritage, those savings would grow to be a total of $3.3 billion over 5 years.[6] The Heritage Foundation report formed the basic framework for H.R. 1756, "The Chrysler Bill" as it was originally introduced in the 104th Congress.

In February 1995, the same James W. Winchester and a colleague, Paul Wolff, former Associate Administrator for NOAA for Ocean Service, released a white paper, entitled: *"A proposal to restructure the National Oceanic and Atmospheric Administration (NOAA), in order to reduce its budget by $1 billion a year."*[7] This proposal would have terminated a number of NOAA Programs, and transferred its legally mandated functions to a newly created independent "United States Weather Bureau."

The Chrysler Bill (H.R. 1756)

The Chrysler Bill was the first of several proposals to legislate the elimination of the Department of Commerce and in the process broach the idea of either eliminating or restructuring NOAA. H.R. 1756 became a model by which a Republican-controlled Congress would seek to downsize the federal government to achieve a balanced budget by the year 2002. The most important emphasis of this legislation was its plan to transfer a number of NOAA's functions to other federal agencies and to contract out services where possible with the private sector while attempting to reduce costs to the taxpayer and redundancy of programs in the federal government.

The original Chrysler Bill was very ambitious in its scope and its effects on NOAA would have been far reaching. For example, H.R. 1756 would transfer the National Marine Fisheries Service (NMFS) [fish catch] enforcement activities to the US Coast Guard/DOT. NMFS research activities and species protection functions would be transferred to U.S. Fish and Wildlife Service in the Department of the Interior (DOI).

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[5]National Weather Service: A Strategy and Organization Concept for the Future. June 1993, Booz-Allen & Hamilton Inc.

[6]Hodge, Scott and Adam Theirer. A Blueprint to Abolish the Department of Commerce. The Heritage Foundation.

[7]Testimony of Paul Wolff before the House of Representatives Committee on Science. September 12, 1995.

Seafood inspection would be transferred to the U.S. Department of Agriculture (USDA).

Many State fishery grants and commercial promotion programs would be terminated. NOS geodesy functions would be transferred to the U.S. Geological Service in DOI. Observation and prediction activities relating to pollution, and estuarine research and coastal assessment functions would be terminated. Marine and estuarine management responsibilities would transfer to DOI. Nautical and aeronautical charting functions would be transferred to the Defense Mapping Agency (DMA), with instruction to terminate cartographic functions performed by the private sector. NESDIS weather satellite functions would be transferred to the National Weather Service (NWS), and its data centers would be offered up for sale to private sector. NWS itself would be transferred to DOI; however, many specialized weather services and NOAA's Regional Climate Centers would be terminated.

H.R. 1756 would also terminate the NOAA Office of Oceans and Atmospheric Research. Congressional drafters of this legislation believed many of OAR's Laboratories could perform better and be managed more efficiently by the private sector. Consequently, OAR's Environmental Research Labs (ERL), and some other NOAA labs of commercial interest would be put up for sale, while others which support marine research would be transferred to DOI. OAR's U.S. Weather Research Program would be transferred to NWS under DOI. H.R. 1756 also called for the termination of the NOAA Corps of commissioned uniformed officers (CORPS), and the Fleet Modernization Program would be discontinued. Many ships and aircraft in the NOAA suite of research vessels would be put up for sale to the private sector. Finally, those former NOAA functions transferred to other agencies would be funded at 75% of FY1994 levels in FY1996, and capped at that level thereafter.

Provisions of the original Chrysler Bill were modified after deliberation in both chambers of Congress. The tenet of successive legislative proposals to restructure NOAA was to keep its core functions intact, and to have it operate primarily under one agency.

Roth Proposal (S. 929, amended)

Senator Abraham introduced a virtually identical companion bill to H.R. 1756, S. 929, on Jun. 15, 1995. However, the Senate Government Affairs Committee, then chaired by Senator Roth, reported out S. 929 with an amendment in the form of a substitute bill on Oct. 20, 1995 (S.Rept. 104-164). Sect. 301 of S. 929, the National Oceanic and Atmospheric Administration Act of 1995, reflected new thoughts and ideas from the Senate about the disposition of NOAA, in the event the Department of Commerce were to be eliminated. The Senate report stated that, "Congress finds that the establishment of an independent agency for ocean, coastal, and atmospheric programs will facilitate the development of a single agency and unified means for research concerning ocean, coastal and atmospheric programs." In other words, S.929 supported an independent, intact NOAA.

S. 929 also contained a 10% reduction in funding for NOAA for FY1996, and a second, larger cut of 35% which would take effect after NOAA was established as an independent agency. As an independent agency, NOAA would fall under the authority of Sect. 104, of Title V, of the U.S. Code, as recommended by the Stratton Commission.

All 5-proposed executive level administrative appointees would be subject to confirmation by the U.S. Senate.

The Roth bill, however, also directed OMB to report on the feasibility of eventually folding NOAA into a newly created Department of Natural Resources, and to report on potential savings from privatizing seafood inspection services, certain weather services, data processing and dissemination services, charting, and marine navigation services, including most of those performed by NOAA CORPS utilizing the NOAA fleet. However, the NOAA CORPS would remain an integral part of NOAA. Furthermore, NOAA would be directed to consult and coordinate its environmental policies with the White House Council on Environmental Quality (CEQ). Regulatory rulemaking at NOAA would proceed as before, both during and after the transition.

Budget Reconciliation (H.R. 2491)

During deliberations to draw up a budget resolution for FY1996-2002, Congress once again focused their attention on the Chrysler Bill. The House made known its intent to attach a proposal to eliminate the Department of Commerce as part of its FY1996 budget reconciliation package. Each House Committee with jurisdiction over NOAA was given an opportunity to propose how they would bring about a more cost effective NOAA.

Chairman Walker of the House Science Committee was the first to offer a substitute for the original Chrysler Bill. The revised H.R. 1756, was substantially modified by the Committee, and called for the creation of a National Institute of Science and Technology which initially would house an "essentially intact" NOAA, the National Bureau of Standards (formerly NIST), and the Office or Air and Space Commercial Services. That not withstanding, the Committee called for termination of about 30 NOAA research programs, the repeal of a number of laws affecting NOAA's authority, and the termination of the NOAA fleet of research vessels and NOAA Corps Officers. Moreover, NOAA's authority to make fisheries grants and support fisheries promotion would be terminated.

On October 17, 1995, the Committee on the Budget House of Representatives released H.Rept. 104-280, on a "Seven-Year Balanced Budget Reconciliation Act of 1995." Sect. 17205 of that Act dealt with NOAA, and would have transferred many functions of NOAA to U.S. the Department of Agriculture. The logic behind this proposal stemmed from the original intent for the National Weather Bureau under the Organic Act of 1890, to be transferred from the U.S. Army to the U.S. Department of Agriculture.

The version which survived as the final Budget Reconciliation bill for FY1996 (H.R. 2491), appeared to be a hybrid of House Science and Government Reform Committee versions. The Senate did not choose to address the abolition of the Department of Commerce, or its agencies, in its respective version of the reconciliation bill.

The Department of Commerce Dismantling Act (H.R. 2586)

H.R. 2586 was introduced on November 11, 1995 by Rep. Archer for the Committee on Ways and Means, to raise the debt ceiling. Sections 2005 and 2006 of that Act set forth recommendations regarding the disposition of NOAA and its programs. While very similar in perspective to legislation on Budget Reconciliation (H.R. 2491), introduced by the House Government Reform and Oversight Committee, H.R. 2586 sought to create a National Scientific, Oceanic and Atmospheric Administration (NSOAA) which would assume many of the functions and responsibilities of NOAA, and other science programs within DOC.

Like H.R. 2491, it would terminate various research programs and accounts in NOAA, and repeal various U.S. laws for which NOAA has authority. But there are also some important differences. H.R. 2586 would transfer aeronautical charting responsibilities and public services, currently provided by NOAA to the Federal Aviation Administration with shared funding, to the Defense Mapping Agency. The Director of the U.S. Geological Survey would assume responsibilities for all other functions relating to mapping and charting and geodesy, and was instructed to terminate any functions which can be performed by the private sector. The NOAA CORPS would be terminated.

Most remaining functions would be transferred to a newly created NSOAA, except for coastal non-point pollution control responsibilities which would be transferred to the Environmental Protection Agency (EPA). The bill also would terminate a number of administrative positions within NOAA and any office of NOAA whose primary purpose is communications, legislative, personnel, public relations, budget, constituent, intergovernmental, international policy and strategic planning, sustainable development, administrative, financial, educational, legal, or coordination. Funding for the surviving entities of NOAA in NSOAA would be capped at 75% of 1995 levels. Those programs not transferred to NSOAA, but not terminated, would be subject to an additional 10% cut the following fiscal year.

Department of Commerce Response to the Dismantlement of NOAA

Then Secretary of Commerce Ron Brown, testified on several occasions before Congress that the Commerce Department is the only federal department whose existing structure encourages the integration of economics, environmental stewardship, technology and information. He added that NOAA provides the environmental information, science, technology and resource management expertise which is the hallmark of an economically healthy nation. Then Secretary Brown also asserted that NOAA products and services facilitate smooth and efficient conduct of U.S. commerce and cited how NOAA's provision of weather warnings and forecasts for public safety has protected lives and property of U.S. taxpayers and has enhanced U.S. economic competitiveness.

The Commerce Department, early on, addressed specific details of the Chrysler bill addressing the synergy of interdependent programs within NOAA and the Department of Commerce budget, and projected how activities at both agencies would probably be affected. In general, their response has covered concerns about the nation's fisheries, weather services, charting services, satellite, data, and information services, the NOAA

CORPS, and its Oceanic and Atmospheric Research Programs. Some of their major concerns of officials at NOAA can be summed up as follows:

- They are wary about the lack of experience of other agencies which would receive transferred functions, such as weather and climate services, environmental analysis, and coastal and marine management.

- They are skeptical that important partnerships affecting commerce and environmental health created with State, regional, tribal, and local governments and the private sector may not survive a transfer to another agency.

- They are uncertain about continued funding and maintenance of satellite programs such as GOES and POES, which help to forecast severe weather and monitor the environment for scientists.

- They are concerned about the loss of vital operations, including the guarantee that important data would continue to be provided by the private sector for maps and charts for safe and efficient commercial and recreation marine transport.

- Private entities have expressed no desire to collect or maintain (legacy) data. NOAA claims that while commercial weather services are anxious for government contracts, they are less than enthusiastic about maintaining NOAA's federally-mandated core responsibilities, investing in capital equipment investments, and assuming liability for their products.

- Transferring NOAA charting functions to the Department of Defense Mapping Agency (DMA) would engender national security risks which would affect accessibility of consequent data and products. Also, separate but equal functions would be necessary to serve both military and civilian clients, increasing programmatic redundancy and operational costs.

- FAA currently funds two-thirds of NOAA responsibilities for aeronautical charting. One of NOAA's core missions is to provide maps and charts for safe and efficient commercial and recreation marine transport. They argue that privatization of these services could put a "for profit" spin on all mapping and charting services.

- Equitable non-commercial access to data and products for scientific research purposes is yet another concern.

- CORPS elimination would end the effectiveness of NOAA's rapid response to natural disasters and environmental emergencies at sea, and those in coastal and estuarine environments. The CORPS is also a critical component of law enforcement in coastal areas and, consequently, those functions would still need to be funded by another agency (e.g. Coast Guard).

- The NOAA fleet currently supports not only research but operations. Responsibilities for both commercial and recreational charting and the NOAA

CORPS data collection in support of NOAA's core mission remains unchanged.

NOAA has been particularly adamant about the importance of Environmental Research Labs (ERLs), which support NOAA's continued operations and core mission, which they believe cannot be separated out from the Office of Oceanic and Atmospheric Research (OAR). They claim that OAR is the only ongoing U.S. government effort for maintaining long-term atmospheric and oceanic monitoring networks and prediction systems, including the highly utilized ocean buoy environmental data network. Furthermore, NOAA has argued that many of the labs suggested for privatization are not-commercially attractive, and in many cases serve only to fulfill NOAA requirements for data collection under law.

The crux of NOAA's argument to keep OAR intact and responsible for managing its labs revolves around what it describes as economic benefits to the nation of up to $2.7 billion from seasonal and inter-annual climate research (ENSO). Also, OAR supports U.S. commercial fisheries providing them with scientific data and information. NOAA's Sea Grant education and outreach has been cited as one of the few remaining programs for training new generations of expertise in oceanography. Knowledge about oceanic circulation has been enhanced by ocean tracer studies in the Marine Environmental Labs as well as marine seafood disease and non-indigenous pest control research. OAR also conducts valuable research in coastal pollution control and has helped to develop alternatives for environmentally hazardous substances such as chlorofluorocarbons (CFCs).

Commerce, State, and Justice Appropriations and NOAA

Without actually legislating a reorganization of NOAA, budget negotiations between the Clinton Administration, the House, and the Senate, have set the stage for how a new NOAA might look and operate over the next seven years. The Conference agreement on the original Commerce, State, Justice Appropriations bill for FY1996, H.R. 2076 (H.Rept. 104-378), granted NOAA a total budget authority of $1.86 billion, with an appropriation of $1.796 billion for Operations, Research and Facilities (ORF). President Clinton vetoed H.R. 2076 on Dec. 19, 1995, and that veto was sustained. NOAA, thereafter, continued to operate under a series of continuing resolutions until H.R. 3019, the Omnibus Appropriations Act for FY1996, was signed into law April 28, 1996. Any language to abolish the Department of Commerce in temporary funding legislation was either checked by Presidential veto or removed prior to the President's consideration. During this time, continuing resolutions funded most of NOAA's programs at H.R. 2076 conference levels. An exception was the Global Learning and Observation to Benefit the Environment (GLOBE) program which was zeroed out in Conference, but singled out for funding at 75% of FY1995 levels in continuing resolutions. The President had requested a full funding of GLOBE of $7 million, as an "FY1996 Presidential investment addback;" however, H.R. 3019, stipulated that no funding would provided for GLOBE for FY1996.

Passage of H.R. 3019 (P.L.104-134), granted NOAA a total FY1996 budget authority of $1.85 billion, which was about $58.5 million below H.R. 2076 conference levels, and about $9.4 million less than the President's FY1996 request. Of that amount $1.793 billion funded NOAA's Operations, Research and Facilities (ORF)

account, which ended up about $13.4 million below H.R 2076 levels. In general, funding instructions remained the same as stipulated in the FY1996 conference report on H.R. 2076, with few exceptions. Title II of H.R 3019 provided supplemental appropriations of $7.5 million for NOAA's Construction account to rebuild fish hatcheries in the Pacific Northwest destroyed by flooding.

The FY1997 Commerce, State, and Judiciary Appropriations bill (H.R. 3814), as passed by the House on July 24, 1996, would have provided the National Oceanic and Atmospheric Administration (NOAA) a budget authority (BA) of $1.78 billion for FY1997. An additional $70 million in funding for NOAA, offset by collection of fees, transfers from other accounts, as well as funds carried over from unobligated balances, resulted in total House approved BA for NOAA of $1.8 billion for FY1997. This amount was almost $80 million below FY1996 levels. The main Operations, Research and Facilities (ORF) account received approximately $1.74 billion. However, this was $0.24 billion below the President's FY1997 request, and NOAA would be rescinded $10 million from its unobligated balances.

H.R. 3814 would have funded most NOAA programs at, or slightly above, FY1996 levels. The Omnibus Civilian Science Authorization Act (H.R. 3322), approved by the House, figured significantly in setting overall spending caps on many NOAA programs (Weather Modernization at National Weather Service, e.g.). The House also went along with Administration proposals to eliminate the National Undersea Research Program, and to phase out the NOAA Corps by September 1997. The House upheld their intention to eliminate the $7 million GLOBE program, and specified that no NOAA staff could be detailed for this activity. Also, the Office of Oceanic and Atmospheric Research (OAR) would now be responsible for funding its own Marine Services, now provided for under Program Support. The House would make NOAA more reliant on reprogramming of funds, and continued to encourage the agency to seek partnerships with academia and the private sector to defray costs. They also called for a streamlining of operations at NOAA's Administrative Headquarters, as a potential source for reprogrammed funding. The House also included provisions prohibiting federal funding for acquisition of any new research vessels. During floor action on H.R. 3814, the House approved an amendment to restore funding of $2 million for endangered species recovery at NOAA. This offset would come from within NOAA and primarily fund Mitchell Act [fish] hatcheries.

The Senate Appropriations Committee took a somewhat different tack on H.R. 3814, recommending more than an additional $219.5 million for NOAA than the House for a total funding for NOAA of about $1.99 billion. Some $1.93 billion of that would be intended for ORF funding. Notably, the Senate Appropriations Committee increased the OAR budget to include an additional $8 million for Climate and Global Change above FY1996 appropriations. The Committee also addressed other OAR programs. It approved continued funding for a Health of the Atmosphere (HOA) Initiative under Long Term Air Quality Research, added $2.5 million for Marine Prediction Research (which includes funding for the VENTS program and Arctic Research), added $2.9 million for Sea Grant (above FY1996), and added $2.9 million for the National Undersea Research Program (NURP), above FY1996. The Committee also put the GLOBE program back into the NOAA budget at $7 million as per the President's request. The Senate also proposed an increase of $22 million above House levels for NOAA's Construction account, an additional $2 million for the Fleet Modernization

program, and a restoration of $3.79 million for general administration, which had been reduced by P.L. 104-134. The Committee also concurred with the House over a rescission of $10 million from unobligated funding for Landsat-7 under the NESDIS budget activity.

The final FY1997 appropriations language agreed to by the House and Senate in the Omnibus Consolidated Appropriations Act (H.R. 3610, P.L. 104-208) provides a total NOAA budget of approximately $1.92 billion, which conforms more closely with the Senate recommended levels, but not consistently. Of this total, $1.85 billion is directed towards ORF. Additionally, P.L. 104-208 provides for a $20 million recision from the ORF account, which is double the amount recommended by both the House and Senate, and is derived after a re-estimate of amounts necessary to conduct NOAA satellite operations. Conferees agreed to fund the GLOBE program at $6 million, $1 million below request; and also concurred with House language to eliminate Marine Services as a separate budget line item under Program Support. Instead a new budget line item, 'Data Acquisition,' is added to NOS, NMFS, and OAR program activities. The rationale behind this is to encourage program directors to more competitively seek out private research vessels suitable for each program's data collection activities. The NOAA Commissioned Corps (CORPS), facing elimination in September 1997, was reprieved temporarily. Conferees, instead, instated a personnel cap of 299, by September 1997; and expect NOAA to transmit a legislative proposal and a long-term plan for the CORPs. Construction at NOAA was funded at $58.3 million. Increases are for construction of three new Weather Forecast Offices (WFOs) and for the National Estuarine Research Reserves. The Fleet Modernization account realized a $2 million increase ($8 million total), for vessels to come on line in FY1997, as recommended by the Senate.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY[8]

The genesis of the National Institute of Standards and Technology can be found in the U.S. Constitution. Article I, Section 8 gives Congress the power to "fix the Standard of Weights and Measures." During the nineteenth century, a minuscule Office of Weights and Measures was maintained in the Department of the Treasury. By the turn of the twentieth century, however, the growing industrialization of the Nation impelled Congress to establish the National Bureau of Standards (NBS) by passing the NBS Organic Act of 1901 (P.L. 56-177). NBS was officially moved into the Department of Commerce in 1903.

Prior to 1988, the mission of NBS was to develop and maintain standards and measurement support for scientific investigations, engineering, manufacturing, commerce and educational institutions, as well as to provide technical and advisory services to other government agencies on scientific and engineering problems. The Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418) changed the name of NBS to NIST, and explicitly charged the agency with providing technical services to facilitate U.S. industry's competitiveness objectives. P.L. 100-418 directs NIST also to perform functions in support of two broad goals: (1) enhancing the competitiveness of

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[8]Prepared by Lennard G. Kruger, Specialist in Science and Technology, Science Policy Research Division.

American companies by providing appropriate support for industry's development of pre-competitive generic technologies and diffusing government-developed technological advances to users in all segments of the American economy; and (2) providing the measurements, calibrations, and quality assurance techniques which underpin U.S. commerce, technological progress, improved product reliability, manufacturing processes, and public safety.

With a FY1997 budget of $588 million, NIST is by far the largest component of the Technology Administration of the Department of Commerce. Unlike most national laboratories, NIST has a mission specified by statute (15 U.S.C. 271-282a), has its own authorization and appropriation, and is headed by a Senate-confirmed Presidential appointee (the National Institutes of Health is the only other federal laboratory complex which shares these characteristics).

NIST currently consists of in-house R&D and standards services activities (called Scientific and Technical Research and Services and funded at $268 million in FY1997), and external grant programs (called Industrial Technology Services and funded at $320 million in FY1997). The NIST in-house R&D effort is conducted by approximately 3,200 scientists, engineers, technicians, and support personnel (plus some 1,200 visiting scientists per year from industry, academia, and other government agencies). This work is performed in seven research laboratories in Gaithersburg, Maryland and Boulder, Colorado.[9] The research directly supports standards and measurement related functions and services which NIST provides to industry and to other government agencies. NIST sees these activities as supporting basic "infrastructural technologies" which enable the development of advanced technologies, and which industry can use to characterize new materials, monitor production processes, and ensure the quality of new product lines. For example, NIST's super-accurate atomic clock is used to calibrate time and frequency signals critical in electric power grids, communications networks, banking systems, and satellite navigation systems. Another example is NIST's development of sophisticated measurement techniques for semiconductor chips, which enable industry to achieve ultra-precise manufacturing controls necessary to develop next generation semiconductor technologies. A major emphasis of NIST laboratory work is cooperative research with industry aimed at overcoming technical barriers to commercialization of emerging technologies. NIST participates with U.S. companies in cooperative research and development programs in over 200 research areas.[10]

NIST laboratory work also provides research, technology, and technical expertise to NIST's "Technology Services" program. Technology Services provides measurement and standards related services to U.S. industry, government, and the public. Many of these services are geared towards increasing the competitiveness of U.S. industry and/or overcoming barriers to international trade. Specific Technology Services activities include: providing technical standards expertise to support negotiation and implementation of international trade agreements such as the North American Free

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[9] These research laboratories are: Electronics and Electrical Engineering, Manufacturing Engineering, Physics, Chemical Science and Technology, Materials Science and Engineering, Building and Fire Research, and Information Technology.

[10] U.S. Dept. of Commerce. Technology Administration. National Institute of Standards and Technology. Cooperative Research Opportunities for Industry at NIST, June 1994. p. 1.

Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT); coordinating federal, state and local government efforts to ensure that consistent weights and measures are used in the marketplace; developing, producing, and distributing Standard Reference Materials; providing Standard Reference Data; providing calibration and laboratory accreditation services; and planning, organizing, and managing the placement of technical standards experts in selected U.S. embassies to provide technical expertise in the identification and resolution of standards-related technical barriers to trade.

External grant programs, including the Advanced Technology Program and the Manufacturing Extension Partnership, were created by Title V of the Omnibus Trade and Competitiveness Act of 1988, which ". . . significantly expands the role of NIST as the government's lead laboratory in support of U.S. industrial quality and competitiveness . . . ." These programs were designed to facilitate industrial activities to utilize advanced process technology; to promote cooperative ventures between industry, universities, and government laboratories; and to promote shared risks, accelerated development, and increased skills. Beginning in FY1991, the total NIST budget began marked growth as Congress started funding external grant programs authorized by the Omnibus Trade and Competitiveness Act. However, the 104th Congress sharply reduced the growth of these programs.

DOC Dismantling Proposals: Implications for NIST

Proposals considered in the 104th Congress to eliminate the Department of Commerce would have had major implications for NIST. The House and Senate legislation would eliminate NIST's major external grant programs, the Advanced Technology Program and the Manufacturing Extension Partnership. In H.R. 2586, NIST would reclaim its original name, the National Bureau of Standards (NBS). Standards functions, including the laboratories, would be consolidated into a new independent Executive Branch agency, the National Scientific, Oceanic, and Atmospheric Administration (NSOAA), which would also have jurisdiction over NOAA and the Office of Space Commerce. NSOAA funding for the first fiscal year after abolishment is limited to 75% of fiscal year 1995 funding, and funding for the second fiscal year is limited to 65% of FY1995 funding. The House proposal would also specifically abolish NIST's metric program and repeal the law which requires federal agencies to use the metric system in procurements, grants, and other business related activities. S. 929, as amended, would incorporate NIST's standards functions (including the NIST laboratories) and the Malcolm Baldridge Quality Award program into a newly established independent Office of Patents, Trademarks, and Standards.

Supporters of the NIST reorganization proposals cite the need to reduce the size and cost of government by terminating non-essential government programs which may be more appropriately performed by the private sector, and by consolidating essential government functions into a streamlined bureaucracy. Proponents of terminating NIST's Industrial Technology Services, cite these programs as prime examples of "corporate welfare," whereby the federal government invests in applied research programs which should more appropriately be conducted in the private sector. The Administration has defended these programs, arguing that they help industry (including small manufacturers) develop generic technologies that, while crucial to industrial competitiveness, would not or could not be developed by the private sector alone.

The goal of eliminating NIST's Industrial Technology Services was addressed by the 104th Congress throughout the budget process. Both authorizations and budget resolutions sought immediate termination of the ATP and MEP programs, while continuing future funding for NIST's in-house R&D (STRS) program. The Administration strongly defended these programs, and the proposed zero funding of the ATP in the original FY1996 Department of Commerce appropriations bill (H.R. 2076) was among the reasons leading to a Presidential veto of the bill. The final FY1996 appropriations bill (P.L. 104-134) provided $221 million for ATP and $80 million for MEP.

The final FY1997 levels as set forth in the Omnibus Consolidated Appropriations Act (P.L. 104-208) provides $588 million for NIST. This is 29% less than the Administration request and 5% less than the FY1996 level, but 25% more than the level provided in the House passed H.R. 3814 (the FY1997 Commerce, State, and Judiciary appropriations bill), and 32% more than in the Senate reported H.R. 3814. The FY1997 NIST appropriation breaks down as follows: $268 million for STRS; $225 million for ATP; $95 million for MEP; and zero funding for construction. Funding for the ATP is significantly higher than the House and Senate levels in H.R. 3814, and the money is provided without any of the restrictions recommended in the original House and Senate legislation. Also, the conference agreement contains language allowing one additional year of support for six-year old manufacturing technology centers funded under the MEP program.

Proposals to reorganize NIST's standards activities and laboratories into a National Scientific, Oceanic, and Atmospheric Administration, or into an Office of Patents, Trademarks, and Standards, would keep NIST's in-house activities largely intact, although spending limits would be imposed under H.R. 2586. The arguments supporting such an action hinge on the efficiencies of consolidation and the reduction of federal bureaucracy. For example, the House proposal would eliminate the position of Associate Director within NIST, along with five other presidential appointee positions within NOAA.

Critics of the proposed reorganization of NIST, including the Administration, question whether there are any efficiencies, cost savings, or benefits to be gained by consolidating NIST and NOAA into a new agency, or by combining NIST with the Patent and Trademark Office. The House proposal to limit the NIST laboratory budget to 75% of FY1995 levels would be misguided, the Administration asserts, because as the state of modern technology advances, critical measurement technologies become more sophisticated, complex, and essential, and the capabilities and responsibilities of the NIST laboratories must necessarily expand. Furthermore, the Administration argues, because NIST provides valuable technical expertise to industry, and because NIST activities contribute a technological component to complex trade issues, separating NIST from the Department of Commerce trade mission could be detrimental to U.S. competitiveness.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION[11]

The National Telecommunications and Information Administration (NTIA) is a unit within the Department of Commerce, with approximately 250 staff persons and offices in Washington, D.C., Annapolis, Maryland, and Boulder, Colorado.[12] NTIA was established in 1978 (pursuant to Reorganization Plan No. 1 of 1977 and Executive Order 12046 of March 27, 1978) by combining the Office of Telecommunications Policy of the Executive Office of the President, and DOC's Office of Telecommunications. NTIA was created to serve the President and the Secretary of Commerce in setting telecommunications policy, and to provide assistance in implementing that policy. The Assistant Secretary for Communications and Information reports directly to the Secretary of Commerce in carrying out NTIA's policies. It has three major roles: continuing its responsibility for setting and implementing telecommunications policy; managing the federal broadcast spectrum; and providing grants for telecommunications infrastructure development.

Setting and Implementing Policy

Among the many science and technology policy-setting responsibilities of NTIA is to assist and formulate the National Information Infrastructure (NII) initiative for the Administration. The NII is a broad policy initiative intended to create broad public and private interest and investment in information and telecommunications technologies considered crucial for developing the Information Superhighway. The Assistant Secretary for Communications and Information, who also administers NTIA, is the chair for several Information Infrastructure Task Force (IITF) subcommittees setting policy for the NII. Among the policy goals are to ensure that the United States does not become a nation of technology "haves and have nots," and that universal service of telecommunications is maintained for all U.S. citizens.[13]

NTIA also provides policy guidelines for U.S. participation in the international satellite organizations Intelsat and Inmarsat. Intelsat (the International Telecommunications Satellite Organization) was initiated by the United States as an international consortium to help create and maintain a global satellite communications system, while Inmarsat (International Mobile Satellite Organization) establishes a global satellite system for maritime and other mobile communications.[14] NTIA's role for both treaty-based organizations is to provide policy outlines of the U.S. position on

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[11]Prepared by Glenn J. McLoughlin, Specialist in Science and Technology Policy, Science Policy Research Division.

[12] U.S. Department of Commerce. National Telecommunications and Information Administration. Annual Report For Calendar Year 1994. Washington: NTIA, April 1995. p. 1.

[13] For more on current NII funding and policies, see: U.S. Library of Congress. Congressional Research Service. The National Information Infrastructure: The Federal Role, by Glenn J. McLoughlin. CRS Issue Brief 95051. [continuously updated].

[14] Codding, George A. The Future of Satellite Communications. Boulder, Colorado: Westview Press, 1990. pp. 37-40; 50-51.

communications policy, particularly as both organizations undergo restructuring. In other areas, NTIA participated in International Telecommunications Union (ITU) meetings worldwide, provided support and representation at the G-7 meeting in Brussels in February 1995, and coordinated standards compatibility for the first Low Earth Orbit Mobile Satellite Service system. Finally, among multilateral and bilateral satellite agreements and arrangements involving NTIA are PEACESAT (Pan-Pacific Educational and Communications Experiments by Satellite Program) with twenty-one Pacific Basin nations, an agreement with Russia to alleviate transmission interference in the GLONASS (a Russian navigation satellite system) with the U.S. Global Positioning System (GPS), an agreement with China to help establish a civil emergency telecommunications system, and bilateral telecommunications discussions with Japan.[15]

Federal Spectrum Management

Another responsibility of NTIA is oversight of the communications broadcast spectrum used by the federal government. The spectrum of wireless transmission, and the corresponding "bands" of broadcast frequency as used for private and state and local use, is regulated and managed by the Federal Communications Commission (FCC).[16] NTIA provides policy and management guidelines on the federal government's use of the spectrum and how it is allocated. The FCC has been given authority to auction off parts of the spectrum for private use, both to encourage privatization and to raise federal revenue.[17] As part of its mandate to manage spectrum for government use, NTIA has developed several programs. It provides analysis and projections of trends of broadcast traffic and spectrum use. It also provides reports to policymakers on shifting spectrum from federal to private, commercial use. NTIA has initiated a program to automate the federal spectrum management system. It has started an "Openness Program" with other federal agencies to exchange information on broadcast issues. Finally, as already stated, several global, bilateral, and multilateral agreements and arrangements include spectrum management and oversight policy.[18]

Grants Program

The NTIA information infrastructure grants program is the third major component which has an impact on national science and technology priorities. It represents the largest part of the NTIA budget, and was arguably the most contentious of the NTIA responsibilities considered by the 104th Congress.

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[15] U.S. Department of Commerce. National Telecommunications and Information Administration. Annual Report for Calendar Year 1994. Op. cit. pp. 5-13.

[16] U.S. Congress. Office of Technology Assessment. Wireless Technologies and the National Information Infrastructure. OTA-ITC-622. August 1995. p. 261.

[17] U.S. Library of Congress. Congressional Research Service. FCC Auctions: Legislation in the 104th Congress, by Richard M. Nunno. CRS Report 95-923. October 11, 1996. 6 pages.

[18] U.S. Department of Commerce. National Telecommunications and Information Administration. Annual Report for Calendar Year 1994. Op. cit. pp. 11-13.

There are three telecommunications grant programs which NTIA supports. The first, the Telecommunications and Information Infrastructure assistance program, is also known as the TIIAP or more commonly the information infrastructure grants program. This program is closely tied to the Clinton Administration's NII policy for developing the telecommunications and information infrastructure of the 21st century. NTIA awards matching grants to state and local governments, health care providers, schools, libraries and other public sector non-profit organizations to ensure that they are connected to communications networks. The Clinton Administration considers the information infrastructure grants program one of the cornerstones of its national technology policy based on public-private partnerships and cooperation.

The other two programs focus on facilities equipment and children's broadcasting. One is the Public Telecommunications Facilities Grants Program (PTFTP), also known as the public broadcasting and facilities program. This program, transferred to NTIA in 1979 from the Department of Health, Education, and Welfare, provides grants to public broadcasting organizations to buy new equipment and provide broadcast services nationwide. The other grant program is the National Endowment for Children's Educational Television, which encourages and supports the production of children's broadcasting.

Smaller NTIA programs representing the federal interest in U.S. telecommunications policy include minority assistance for ownership of telecommunications businesses, interagency policy coordination, and publication of telecommunications policy reports. NTIA also promotes communications standards policies and programs both domestically and internationally. However, the major part of the Department of Commerce standards program is in NIST, and this policy issue is described more fully in that section.

Effects of DOC Dismantling Proposals and Budget Issues

The current policy debate regarding the future of NTIA falls within two closely parallel but separate legislative activities. The first is legislation to eliminate the Department of Commerce, the second the NTIA budget. Both aspects of this legislative activity will very likely shape the role and scope of NTIA in the near future and beyond.

Under H.R. 2586, almost all of the functions of NTIA would be eliminated. Research facilities would be transferred to the Office of Management and Budget for privatization. Satellite programs would be transferred to a newly established National Scientific, Oceanic and Atmospheric Administration (NSOAA); spectrum research would be transferred to a newly established National Bureau of Standards; and federal spectrum management and functions related to international telecommunications agreements would be transferred to the USTR. The budget resolution passed by the House on May 16, 1996, reaffirms the NTIA elimination/reorganization proposals detailed in H.R. 2586.

During the FY1997 appropriations process, the House and Senate generally agreed on similar budget recommendations for NTIA, with one notable difference. As passed by the conferees (P.L. 104-208, H.R. 3610) and originally by the House (H.R. 3814), the appropriations bill provides an overall NTIA budget of $51.74 million for FY1997. The FY1996 budget for NTIA was $54.0 million, while the Administration requested $87.97

million for NTIA for FY1997. The Senate Appropriations Committee had recommended an overall NTIA budget of $35.2 million for FY1997 earlier this year.

The four program functions within NTIA are affected by FY1997 appropriations legislation as follows:

- *Salaries and Related Functions.* P.L. 104-208 provides an FY1997 budget of $15 million for Salaries and Related Functions, below the FY1996 budget of $17.0 million, the Administration's request of $18.47 million for FY1997, and the Senate Appropriations Committee proposed increase to $16 million.

- *Public Broadcasting Facilities, Planning and Construction.* This NTIA program supports planning and construction for public television, radio, and non-broadcast facilities. For FY1997, the House, the Senate Appropriations Committee, and P.L. 104-208 provides $15.25 million in funding for this program. In FY1996, this program was funded at $15.5 million, while the Administration proposed $8.0 million for FY1997.

- *Endowment for Children's Educational Programming.* P.L. 104-208 provides no funding for the Endowment for Children's Educational Programming for FY1997, citing redundancy with other federal programs. Both the House and Senate Appropriations Committee agreed with this position in H.R. 3814. In FY1996, no funding was provided to this program, while the Administration requested $2.49 million for FY1997.

- *Information Infrastructure Grants Program.* This NTIA program provided strong disagreements between the Clinton Administration and the House and Senate regarding the FY1997 appropriations request and recommendations. The House considered NTIA's Information Infrastructure Grants program the basis for providing information technology to areas which are "underserved" by recent technology developments and applications. As passed by the House, H.R. 3814 provided $21.49 million for this program in FY1997, down slightly from $21.5 million in FY1996, but significantly below the Administration's request of $59.0 million for FY1997. The Senate Appropriations Committee provided $4.075 million for the information infrastructure grants program, based on federal budgetary concerns and an inclination to reduce the federal role in developing a broad and extensive national information infrastructure. For FY1997, P.L. 104-208 provides the $21.49 million in funding as recommended by the House. Support for this program will likely be debated in the 105th Congress.

Policy Issues

Proposals in the 104th Congress to eliminate the Department of Commerce generally sought to eliminate most, if not all, of NTIA as well. As already described, several proposals sought to place federal spectrum management within a reconstituted USTR.

What is the possible impact of proposals to eliminate NTIA? Proponents of this legislation contend that its role of supporting telecommunications policy, management

of spectrum, and funding for grants is neither efficient nor appropriate as federal responsibilities. According to this position, current NTIA programs either fill a need for which there is no demand, or provide support for activities which can be better addressed by the private sector. Critics of NTIA maintain that coordination of federal telecommunications policy in a de-regulated environment is outlined in the Telecommunications Act (P.L. 104-104) and is primarily given to the FCC. The auction of broadcast spectrum should be completed by the FCC and management of public use of the spectrum could be performed by the USTR. Similarly, international telecommunications agreements and arrangements could be coordinated more comprehensively through a reconstituted USTR, rather than NTIA. Other programs to encourage development of the information and telecommunications infrastructure should be encouraged through lower corporate tax, relaxed antitrust, and deregulated industry policies and laws. State and local governments should have the primary responsibility for assisting public interest entities like schools and libraries, they argue, not the federal government. In terms of national science and technology policy, critics see NTIA's functions with the larger context of a Department of Commerce which is too large, complex, and unwieldy to efficiently serve the types of scientific research and technology development needed to foster telecommunications growth and applications in the United States.[19]

Supporters of NTIA, led by President Clinton, Vice President Gore, and other Administration officials disagree. Placing NTIA within the context of a national policy to foster government-industry cooperation in technology development, the Clinton Administration argues that NTIA's policy responsibilities, spectrum management, and funding of technology development fill crucial needs which the private sector or state and local governments may not (or will not) support. They maintain that its policy role provides a perspective not found elsewhere: one that responds to U.S. industry needs, balanced by public interest, and reflects technical and policy expertise within the Administration. Communications satellite agreements and arrangements undertaken by NTIA also provide this perspective and are critical in a global economy, according to supporters. NTIA advocates also contend that it is providing the policies to achieve development of the National Information Infrastructure (NII), part of the Information Superhighway of tomorrow.[20] According to an NTIA official:

> The Nation needs the expertise of the National Telecommunications and Information Administration to continue to lead in this area and to ensure that the benefits of the Information Age reach all Americans.[21]

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[19] For a statement echoing these points regarding the Department of Commerce in general, see: U.S. House of Representatives. Committee on Commerce. Statement of Joe Cobb, John M. Olin Senior Fellow in Political Economy, Heritage Foundation. July 24, 1995. The Department of Commerce Dismantling Act of 1995. Washington, U.S. Govt. Print. Off., 1996. p. 172.

[20] U.S. Library of Congress. Congressional Research Service. The National Information Infrastructure: The Federal Role, by Glenn J. McLoughlin. CRS Issue Brief 95051 [continuously updated].

[21] U.S. House of Representatives. Committee on Commerce. Testimony of Larry Irving, Assistant Secretary for Communications and Information. July 24, 1995. The Department of Commerce Dismantling Act of 1995. Washington, U.S. Govt. Print. Off., 1996. p. 145.

Supporters also contend that the NTIA's grant program allows certain non-profit organizations, such as schools, hospitals and libraries, in rural and urban areas, to be included in the information technology future. They contend that this is one area where there is sufficient national public interest to warrant federal programs. Finally supporters argue that transferring NTIA's authority to manage the government's broadcast spectrum would interfere with the President's ability to carry out his executive functions. They contend that while current policies allow the auction of spectrum for private sector use, public spectrum use in times of emergencies and crisis is essential to the national good.

A critical issue affecting the future of NTIA is how policymakers view the future of the United States in a changing and complex telecommunications and information age. Some contend that the development of the Internet--the "network of networks"--and the Information Superhighway already are occurring with little or no assistance from the federal government, and that this development should continue unencumbered by a federal bureaucracy.[22] Observers also maintain that a proposed U.S. Trade Agency can coordinate the U.S. telecommunications position in the global economy, or that a proposed National Scientific, Oceanic, and Atmospheric Administration (NSOAA) can coordinate domestic telecommunications policy. But others respond: could a U.S. Trade Administration adequately address complex and technical telecommunications issues; or could a NSOAA provide international telecommunications policy in a global economy? The answer to these questions may reside in how policymakers see telecommunications development and policy in the next century.

TECHNOLOGY ADMINISTRATION[23]

Reflecting concerns over the competitiveness of American companies and national interest in the role of technological innovation and its contribution to economic growth, the Congress in 1988 created a Technology Administration within the Department of Commerce (P.L. 100-519). Headed by an Under Secretary of Commerce for Technology, the Technology Administration was to include the National Institute of Standards and Technology, the National Technical Information Service, and a "policy analysis office," to be known as the Office of Technology Policy (sec. 201). This organization was tasked by law to:

> . . . conduct technology policy analyses to improve United States industrial productivity, technology, and innovation, and cooperate with United States industry in the improvement of its productivity, technology, and ability to compete successfully in world markets; (P.L. 100-519, sec. 201(c)(2)).

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[22] For more on the Information Superhighway and related issues, see: U.S. Library of Congress. Congressional Research Service. The Information Superhighway: Status and Issues, by Marcia S. Smith. CRS Report 94-954. December 2, 1994. 24 pages.

[23]Prepared by Wendy H. Schacht, Specialist in Science and Technology, Science Policy Research Division.

The House Committee on Science, Space, and Technology report which accompanied P.L. 100-519 (House Rept. 100-673(I)), notes that the Technology Administration ". . . will provide an advocate at a high level for various technology-oriented components of the Department" and is consistent with congressional intent regarding technology and innovation as demonstrated in the provisions of P.L. 100-418, the Omnibus Trade and Competitiveness Act of 1988 (p.17). The Committee expressly stated that the Technology Administration was **not** intended to develop an industrial policy for the United States. This new structure was designed to facilitate the ability of the Commerce Department to marshall its resources to address specific technology-related issues. The role of the Technology Administration ". . . is to enhance the ability of U.S. industries to work together in the face of overseas competition and to coordinate activities in order to improve our ability to compete successfully in world markets" (p.18).

P.L. 100-519 also established the position of Assistant Secretary of Commerce for Technology Policy to direct the Office of Technology Policy (OTP). OTP was mandated to take over the functions of what was formerly the Office of Productivity, Technology, and Innovation (OPTI). During the transition, the law stated that the individual currently serving as the Assistant Secretary of Commerce for Productivity, Technology, and Innovation shall serve as the acting Assistant Secretary for Technology Policy. According to the House Committee on Science, Space, and Technology report, the new Office was designed to provide analysis for the Under Secretary. "[I]ts role is advisory and the Assistant Secretary is not expected to be involved in the management of the Technology Administration or its other components" (p.39). The Office of Technology Policy consists of four offices, each supervised by a director: Strategic Planning and Public Affairs; International Policy; Manufacturing Competitiveness; and Technology Competitiveness. The Office of Metric Programs, which was originally included in OTP, has been moved to the National Institute of Standards and Technology.

Evolution of the Office of Technology Policy

The Office of Productivity, Technology, and Innovation, predecessor to OTP, was established in early 1980 by then Secretary of Commerce Philip M. Klutznick. OPTI was created as part of the reaction to growing concerns that U.S. industrial innovation was declining, with negative consequences for U.S. economic growth, productivity improvement, and international trade competitiveness. In March 1972, President Nixon delivered to Congress the first presidential message on science and technology in which he called for a partnership between the federal government and private industry to marshall research and development to strengthen the economy and improve the quality of life. However, by the mid to late 1970s, there were trends in a number of R&D-related indicators which suggested a weakening U.S. innovation performance relative to past levels and to foreign competition.

In response, President Carter initiated a Domestic Policy Review on Industrial Innovation (May 1978) to identify and recommend federal activities to encourage increased industrial productivity and the development and application of new technology. Representatives from industry, academia, government, and the public participated in the effort to illuminate policies detrimental to the innovation process and to enumerate positive steps to increase the innovative capabilities of American industry. At the end of October 1979, Mr. Carter announced his plan to provide what

he saw as a positive environment for innovation. While the initiatives constituted an acknowledgement that the government had a role to play in the promotion of innovation, the programs and activities offered did not constitute the creation of a general policy in this arena. Instead they were separate efforts which the Administration expected would improve the U.S. economic environment. The establishment of the Office of Productivity, Technology, and Innovation was viewed as one way to provide information, analysis, and coordination for the government in its endeavor to encourage private sector innovation.

OPTI was headed by an Assistant Secretary for Productivity, Technology, and Innovation (formerly the Assistant Secretary for Science and Technology) and was intended to be "...the prime focal point within the Department for cooperative efforts between government and the private sector to enhance productivity and innovation in American industry."[24] In 1980, P.L. 96-480, the Stevenson-Wydler Technology Innovation Act of 1980, provided the legislative basis for this Office. Although the name given in this law was the Office of Industrial Technology, OPTI continued to perform the delegated duties including, as identified in the Senate report on the bill (Senate Rept. 96-781), determinations of the relationships between technology development, innovation, productivity, and global trade competition; recommendations for ways to augment innovation; studies; and policy pilot projects. The National Technical Information Service was placed under OPTI. Additional responsibilities which were assigned to the Office were the operation of a Center for the Utilization of federal Technology (eventually located in the National Technical Information Service) and Centers for Industrial Technology (which were never developed and whose mandate was repealed under subsequent legislation).

Today, the Office of Technology Policy is involved in various activities deemed important to the evaluation and promotion of policies designed to "[i]mprove the business climate for private-sector innovation and investment [and] improve the efficiency and effectiveness of federal civilian technology efforts to maximize their impact on competitiveness, economic growth, and job creation."[25] Among these are a manufacturing assessment study and a project "benchmarking" the industrial competitiveness of U.S. firms in the international marketplace. The Office also manages several international science and technology agreements and is required to evaluate the state of government-industry partnerships.

The Office of the Under Secretary for Technology received its initial appropriation of $3.9 million in FY1990. Of this, $2.6 million was prorated for the Office of Technology Policy with 25 full time equivalent positions. In FY1995, $10 million was appropriated for the Under Secretary, with $7 million for OTP to fund 40 employees. However, the rescission package lowered the total to $8.2 million of which $5.7 million went to OTP. The FY1996 appropriation, mandated under P.L. 104-134, was $7

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[24]Address by Secretary of Commerce Philip M. Klutznick, Feb. 29, 1980. p. 7.

[25]Testimony by former Secretary of Commerce Ronald H. Brown before the Senate Committee on Commerce, Science, and Transportation on January 31, 1995 in: U.S. Congress. Senate. Committee on Commerce, Science, and Transportation. Oversight hearing on the science and technology programs of the Department of Commerce. Washington, U.S. Govt. Print. Off., 1995.

million. During 1996, the latest version of the Department of Commerce elimination bill (H.R. 2586), the FY1997 House Budget Resolution, and the Omnibus Civilian Science Authorization Act of 1996 (H.R. 3322) sought to terminate this entity. However, the Technology Administration was funded for FY1997. In the Administration's budget proposal for FY1997, the President requested $9.531 million for the Under Secretary for Technology and the Office of Technology Policy. The FY1997 Commerce, State, and Judiciary Appropriations bill (H.R. 3814), as passed by the House, provided $5 million for this program in FY1997, while the Senate Appropriations Committee recommended $7.5 million. The Omnibus Consolidated Appropriations Act for FY1997 (P.L. 104-208) provides $9.5 million, which includes $2.5 million for the U.S.-Israel Science and Technology Commission.

Debate Over Elimination of the Technology Administration

The creation of the Technology Administration was one of several attempts to assist American companies facing increased competitive pressures in the international marketplace from firms based in countries where governments actively promote commercial technology development and application. Governmental efforts to facilitate technological advance have been particularly difficult because of the absence of a consensus on the need for an articulated policy. Technology demonstration and commercialization have traditionally been considered private sector functions in the United States. While over the years there have been various programs and policies (such as tax credits, technology transfer to industry, and patents), the approach had been ad hoc and uncoordinated. Much of the program development was based upon what individual committees judged appropriate for the agencies over which they have jurisdiction.

Proponents of the Technology Administration argue that it offers a central focus for governmental activity in technology matters. It is intended to be an organization with which the private sector can work to develop an environment conducive to innovation and the economic growth it can engender. Yet, it does not make industrial policy; technological issues and responsibilities remain shared among the Department of Commerce, the Department of Justice, the Department of Labor, the Department of Defense, the Department of Energy, the National Science Foundation, the Department of Agriculture, the Office of the U.S. Trade Representative, the Office of Science and Technology Policy, the Council of Economic Advisors, and others.

A diffused approach can offer varied responses to varied issues. However, it has sometimes resulted in actions which, if not at cross purposes, may not have accounted for the impact of policies or practices in one area on other parts of the process. Technology issues involve components which often operate both separately and in concert. In some cases, the importance of interrelationships may be underestimated and their usefulness may suffer. The Technology Administration, supporters emphasize, provides a means by which the numerous issues and concerns related to technological advancement can be discussed and addressed.

On the other hand, those who advocate the elimination of the Technology Administration maintain that such an office is unnecessary and a waste of taxpayer dollars. The government has no interest in directly supporting the technology development that is the responsibility of the private sector. Nor should the government

be active in "partnering" with industry. Instead, federal funding should be restricted to basic research and that R&D tied to the mission requirements of the federal departments and agencies.

In place of such efforts, opponents propose the creation of tax incentives which, they argue, will provide the capital resources necessary for industry to invest in additional research and development. Many see capital formation as the largest barrier to American innovation and promote a permanent and expanded research and experimentation tax credit and changes to the capital gains tax to increase the amount of funding available for industrial use. Thus, there is no rationale for an organization such as the Technology Administration.

Whatever decisions are made, it is useful to note that the relationship between government and industry is a major factor affecting innovation and the environment within which technological development takes place. In the past, this relationship has tended to be adversarial, with the government acting to regulate or restrain the business community, rather than to facilitate its positive contributions to the Nation. However, the situation is changing; it has become increasingly apparent that lack of cooperation can be detrimental as American firms face competition from companies in countries where close collaboration is the norm. There are an increasing number of areas where the traditional distinctions between public and private sector functions and responsibilities have become blurred. Many assumptions have been questioned, particularly in light of the increased internationalization of the U.S. economy. The business sector is no longer be viewed in an exclusively domestic context; the economy of the United States is often tied to the economies of other nations. The technological superiority long held by the United States in many areas is being challenged by other industrialized countries in which economic, social, and political policies and practices foster government-industry cooperation in technological development. At issue is whether or not efforts to accommodate these changes would likely be terminated or enhanced if the Technology Administration, along with the Office of Technology Policy and the Industrial Technology Services programs of the National Institute of Standards and Technology (see above), are eliminated.

OFFICE OF AIR AND SPACE COMMERCIALIZATION[26]

The Office of Air and Space Commercialization (OASC) was formally established in 1988 as the Office of Space Commerce. As part of the Office of the Secretary of Commerce, it is DOC's principal unit for the coordination of commercial space-related issues, programs, and initiatives. OASC was created to work with the private sector, other federal agencies, and state and other governmental entities to develop national policies with respect to the commercial use of space. Its responsibility is to advise the Secretary and Deputy Secretary on the formulation and implementation of national policies. These policies are developed to foster the growth and international

[26]Prepared by David P. Radzanowski, Analyst in Aerospace Policy, Science Policy Research Division.

competitiveness of the U.S. commercial space sector, and promote the commercial use of space by U.S. private industry.[27]

The Office currently has four policy priorities:

1) Assist in implementing the Administration's commercial remote sensing policy, formally known as the U.S. Policy on Foreign Access to Remote Sensing Space Capabilities;
2) Assist in implementing the U.S. National Space Transportation Policy (NSTC-4);
3) Monitor and, if necessary, participate in the negotiation of international launch trade agreements with foreign governments; and,
4) Support and track emerging space market trends, including the preparation of *Trends in Commercial Space* (formerly Space Business Indicators), a publication which tracks emerging commercial space industries.

OASC currently has 4 personnel and a FY1996 budget of $457,000. The office is requesting $500,000 for FY1997.

The latest House proposal, H.R. 2586, would transfer OASC, along with all its functions and offices, to the proposed new agency, the National Scientific, Oceanic, and Atmospheric Administration (NSOAA).[28] The Senate proposal, on the other hand, would terminate OASC. Proponents of the House proposal assert that it is necessary to maintain an industry voice in the federal government as it develops and implements policies that affect the U.S. commercial space industry. However, the new office would not have direct access to a cabinet level official and as such would lose some influence in the administration. Proponents of the Senate proposal assert that OASC currently has limited influence on policy and that the elimination of the office will have little or no impact at all on the U.S. commercial space industry.

One aspect that may be lost with elimination of OASC is the statistical tracking of the commercial space industry. In the past couple of years, OASC has not published statistics on the U.S. commercial space industry. Industry has not adamantly complained about the lack of data reporting, but it may have led to increased speculation about the condition and size of U.S. commercial space markets. This increased speculation may have a negative impact on U.S. commercial space firms' ability to attain financial backing for future ventures. The argument also can be made that since the data has not been published recently, it may not be missed if OASC is eliminated.

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[27] U.S. Congress. House of Representatives. Fiscal Year 1996 NASA Authorization, Hearings before the Subcommittee on Space and Aeronautics of the Committee on Science. February 13 and March 16, 1995. p. 49.

[28] It should be noted that the House version refers to OASC's original name, the Office of Space Commerce.

NATIONAL TECHNICAL INFORMATION SERVICE[29]

Established in 1970 by the Secretary of Commerce, the National Technical Information Service (NTIS) serves as a central and permanent repository of scientific and technical information collected and disseminated from federal agencies, as well as from foreign sources (mostly foreign governments).[30] Its collections of 2.5 million documents and data are available to the general public. By law (P.L. 102-395) NTIS is required to be self-supporting and operates as a business without annual appropriations. NTIS receives approximately $40 million per year in revenues from users to cover operating costs.

Increasingly, NTIS relies on electronic storage, retrieval, and dissemination of documents and data to serve its clientele. Computerized databases and online information network systems comprise a large part of these services. For example, NTIS' FedWorld is an online information network system that allows any user with access to computer networks to identify and gain access to a broad array of government information. Over 500,000 people per day use or obtain NTIS documents or data through FedWorld, and NTIS estimates that its active, long-term customer base for FedWorld exceeds one million users. Among the many users of this and other NTIS services are libraries, schools, industry, individuals, and domestic and foreign information service providers. The last category is made up of U.S. and foreign firms and representatives of foreign governments which collect data and documents along with other information and sell it as part of a growing global market for "gray" literature.[31]

H.R 2586 provides that NTIS be transferred to OMB within eighteen months of passage of the bill into law for the purpose of privatization. Supporters of this provision contend that if the Department of Commerce is eliminated, it is unlikely that any other federal agency could easily incorporate NTIS' functions and services. They also maintain that a privatized NTIS would respond more like a business, bringing with it both the efficiency and cost controls that a private sector firm could bring to this service. Some also question whether NTIS serves its public function. Critics contend that NTIS has tried to skirt its public role by restricting re-dissemination of its bibliographic data base and writing licensing agreements with private-sector firms for downstream royalty payments which appear to exceed NTIS' costs.[32] Many contend that since several of these private-sector firms already provide "gray" literature to a wide range of clients, any of these firms would likely have the incentive to undertake

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[29]Prepared by Glenn J. McLoughlin, Specialist in Science and Technology Policy, Science Policy Research Division.

[30]Background information on NTIS provided by the Office of the Director, National Technical and Information Service, Department of Commerce. May 23, 1996.

[31]Gray literature is foreign or domestic open source material that usually is available through specialized channels and may not enter normal channels or systems of publication, distribution, bibliographic control, or acquisition by booksellers or subscription agents.

[32] U.S. Congress. House of Representatives. Restructuring the Federal Scientific Establishment: Dismantling of the Department of Commerce. Hearing before the Committee on Science. Sept. 12, 1995. Washington, U.S. Govt. Print. Off., 1995. p. 400.

NTIS' functions as well as maintain the integrity and comprehensiveness of the collections. They argue that NTIS is a government facility providing a private sector function, and that privatization would bring the burden and benefits where they rightfully belong, which is in the private sector.

However, opponents to this provision counter that since NTIS is funded through its user fees and requires no federal appropriation, privatization would not provide the federal government any direct savings. They also argue that NTIS serves the public good by providing low-cost information to institutions which rely heavily on it, like schools, libraries, and the scientific community. The growth of electronic databases and on-line systems raises additional issues. In an electronic environment, it is easy for public institutions to make information available to anyone with a computer and a modem. One effect is to thereby greatly reduce the market value of data as unique or scarce information. Libraries or universities, which usually provide information for free, can easily redisseminate information to the public. For NTIS, this poses a problem since it must recover its costs by charging for information. Yet, for a privatized NTIS, this could be an insurmountable problem since it would not only have to recover its costs but also make a profit while serving the public. How would a privately-run NTIS continue to make information available at a low cost for the general public if profits are small or do not exist; if fees are raised to ensure a profit, will the public's access to information suffer?

In addition, NTIS documents are not copyrighted and its government data and documents are in the public domain. Would a privatized NTIS remain a comprehensive collection of public resources when no royalties or other intellectual property fee can be collected from their re-use? Also, who would benefit if there is no incentive to protect or maintain information which can be reproduced by competitors?

Another issue arising out of the debate over the future of NTIS is its part in the Paperwork Reduction Act (PRA) of 1995 (P.L. 104-13). The PRA provides specific guidelines on how information collected by federal agencies is made available to the general public. For example, federal agencies cannot charge a requestor more than the cost of dissemination of information or charge royalties or fees for re-use of the information, and NTIS cannot assist federal agencies (which receive appropriated funds) from recovering these costs of information dissemination. These requirements provide a brake on what federal agencies and NTIS may charge the public. But questions regarding NTIS' use of restricted bibliographic data, re-dissemination, and downstream royalty payments again raises concerns about its adherence to the PRA. Supporters of the current NTIS maintain that it has worked effectively under the PRA, is currently addressing issues of restriction of data and royalty payments, and that in the future it is not clear whether a privatized NTIS would consider itself bound under the PRA provisions.

Some have made the proposal, separate from H.R. 2586, that NTIS be reconstituted as a public corporation. It would not be privatized, but it also would no longer be in the Department of Commerce.[33] Under this proposal, an executive board comprised of members from both the public and private sector would run the corporation. It likely would receive funding through user fees while its public interest

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[33] Ibid., p. 392-8.

is maintained. Supporters of this approach contend that NTIS could operate with less bureaucracy, respond to market and commercial needs, and still serve the public good as a public corporation. However, significant questions remain: how would NTIS' current functions be smoothly transferred to those of a public corporation; what would the relationship between NTIS as a public corporation and federal agencies be; and how would the integrity and comprehensiveness of document and data collections be maintained? So far, these and other questions still remain unanswered.

CONCLUDING OBSERVATIONS

As discussed above, proposals to eliminate the Department of Commerce would have significant impacts on DOC S&T agencies, activities, and programs. Legislative proposals for DOC dismantling have evolved since the original Chrysler bill was introduced in June 1995, and further refinements and revisions are possible in the future. While the details may vary, however, all proposals were based on three overriding themes or philosophies supported by the 104th Congress. First, DOC dismantling proposals were part of a debate over what role, if any, the federal government should play in supporting technology development for commercial application.[34] Proposals to terminate programs such as the Advanced Technology Program and Manufacturing Extension Partnership at NIST, the information infrastructure grant programs at NTIA, and the Technology Administration, reflected the belief that the federal government should not fund applied science and technology which is more appropriately and efficiently developed by the private sector. In contrast, opponents of DOC dismantling made the counter-argument that government has an obligation to support technologies which are critical to U.S. competitiveness, and which are unlikely, they asserted, to receive adequate financing by the private sector.

Second, the 104th Congress strongly supported reducing and streamlining the federal bureaucracy. In accordance with this philosophy, DOC dismantling proposals would have either (1) transferred some essential government functions to other existing agencies (e.g., NTIA federal spectrum management and trade-related activities to USTR, NOAA mapping and charting activities to the U.S. Geological Survey and the Defense Mapping Agency); or (2) consolidated others into an independent, newly-formed agency (e.g. NIST and NOAA programs combined into a National Scientific, Oceanic, and Atmospheric Administration[35]). Supporters of DOC dismantling would thus streamline the federal bureaucracy by eliminating the need for a Department of Commerce, while

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[34]For further discussion on the current Congressional debate over appropriate federal roles in technology development, see: U.S. Library of Congress. Congressional Research Service. The Federal Role in Technology Development. CRS Report 95-50 SPR, by Wendy Schacht. Washington, October 15, 1996.

[35]The Chairman of the House Science Committee, Representative Walker, has gone one step further, advocating the consolidation of S&T programs and agencies throughout the federal government into a single Department of Science and Technology. For further information, see: U.S. Library of Congress. Congressional Research Service. A Department of Science and Technology: a recurring theme. CRS Report 95-235 SPR, by William C. Boesman. Washington, Feb. 3, 1995.

retaining essential government functions and services. On the other hand, opponents argue that DOC S&T programs are effectively integrated into the overall DOC mission, and that transferring or consolidating these programs would be needlessly expensive and disruptive.

And finally, budget deficit reduction and movement towards a balanced federal budget continued to be major priorities of the 104th Congress. In tandem with DOC dismantling legislation, termination of selected DOC programs was also pursued in budgetary legislation. While none of the DOC S&T agencies or programs were eliminated in FY1996, most received significant cuts in funding from FY1995 levels (averaging about 7% overall). For FY1997, the Administration and Congress disagreed over further cuts for DOC S&T programs. The final FY1997 appropriation as set forth in the Omnibus Consolidated Appropriations Act (P.L. 104-208) provides an overall increase of 1% over FY1996 levels for these programs. To the extent that DOC dismantling legislation resurfaces in the 105th Congress, budget disagreements between Congress and the President, coupled with the Administration's strong opposition to all DOC dismantling proposals, promise an uncertain fate for S&T programs in the Department of Commerce.