

GAO

Fact Sheet for the Chairman, Government Information, Justice, Transportation and Agriculture Subcommittee, Committee on Government Operations, House of Representatives

June 1993

# INFORMATION DISSEMINATION

## Federal CD-ROM Titles—What Are Available and How They Were Priced



---

---

Information Management and  
Technology Division

B-253643

June 30, 1993

The Honorable Gary A. Condit  
Chairman, Government Information, Justice,  
Transportation and Agriculture  
Subcommittee  
Committee on Government Operations  
House of Representatives

Dear Mr. Chairman:

This report responds to an August 3, 1992, request to review how federal agencies price the compact disc-read only memory (CD-ROM) titles that they make available to the public. In subsequent discussions with your office, we were asked to determine (1) the methods used to establish federal CD-ROM prices, and (2) how much selected agencies charge for their CD-ROM titles. You also asked us to create a list of federal CD-ROM titles.

We found that agencies' CD-ROM pricing methods vary. Generally, agencies rely on their statutory authority to price the CD-ROM titles they disseminate. During our review, we identified over 180 CD-ROM titles that federal agencies make available to the public. While some of these titles are available to the public free of charge, most are priced from \$13 to \$1,895. A detailed explanation of our objectives, scope, and methodology is found in appendix IV.

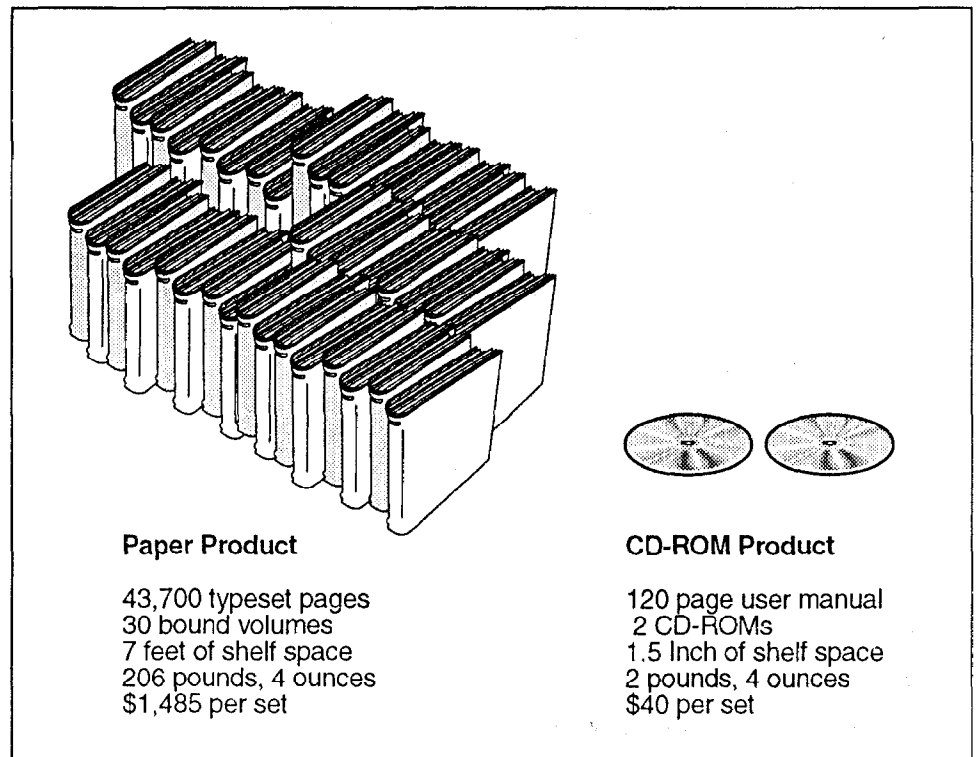
## Background

CD-ROM, which evolved from audio technology, offers an easy way to access and manipulate massive amounts of data. Before data can be placed on a CD-ROM disc, it must be organized, edited, and converted into electronic format—data preparation. Next, the data are placed on a magnetic tape—premastering phase. A master disc is then made from the data on the magnetic tape—mastering phase. Finally, copies are made from the master disc—disc replication.

A single disc can store about 700,000 megabytes of data (equivalent to 200,000 pages of text or about 430 1.4 megabyte floppy diskettes). CD-ROM can store text, data, sound, and full-motion video all on the same disc. Users can then search and retrieve all of this information in seconds. CD-ROMs have a significantly longer storage life than other current media; for instance, the storage life of CD-ROM averages 20 to 100 years, while the storage life for magnetic tapes averages 3-10 years.

Other CD-ROM advantages include space and cost savings. In figure 1, the U.S. Government Printing Office (GPO) illustrates these advantages by comparing the differences between publishing the 1985 Congressional Record on paper and on CD-ROM.

**Figure 1: 1985 Congressional Record**  
(Paper Versus CD-ROM)



CD-ROM technology generally is not used for data that must be updated frequently because its production can take from several days to several weeks. As a result, CD-ROM is normally used for data that can be updated at reasonable intervals (i.e., monthly, quarterly, annually) and for archival data that will not change. Common applications include encyclopedias, directories, statistical data, manuals, maps, and charts.

CD-ROM is becoming the dissemination medium of choice for many agencies, and the federal government is the largest publisher of these discs. Federal use of CD-ROM has increased almost ten-fold during the past decade. For example, during the late 1980s federal agencies published approximately 20 CD-ROM titles. During our review, we identified over 180

---

CD-ROM titles available to the public. In some cases, the same CD-ROM title is disseminated by more than one agency to provide greater access to federal information. In addition to publicly available titles, the federal sector produces many more titles for internal use.

---

## Pricing Methods Vary Dramatically

We found that agencies use a variety of methods to price their CD-ROM titles. These pricing methods are largely determined by the agency actually selling the title. Most federal CD-ROM titles are sold either by the agency that collects the original data or by agencies that produce and disseminate titles for these originating agencies, such as GPO and the National Technical Information Service (NTIS). These agencies price CD-ROM titles on the basis of their authority to disseminate information and, in some cases, agreements made with other agencies and private organizations to disseminate information. We also found that most of the agencies' pricing methods include some common factors such as disc replication, and shipping and handling.

---

## Statutory Authority

GPO and NTIS base their CD-ROM pricing methods on their specific statutory authority to provide information dissemination services for government agencies. GPO is authorized to provide dissemination services at the least cost to the government. Its pricing method is based on recovering only the incremental costs for reproducing and disseminating a product plus a legislated 50-percent surcharge for these services. CD-ROM titles sold through GPO range from \$13 to \$40. Unlike GPO, NTIS is a self-sustaining agency and is authorized to charge market prices so it can generate sufficient revenue to offset operational costs. As a result, NTIS uses a pricing method that is based on market demand. CD-ROM titles sold through NTIS range from \$13 to \$1,200.

We found several cases in which two agencies sold the same CD-ROM title for different prices because of their specific statutory authority. For example, GPO sells the Environmental Protection Agency's (EPA) Toxic Release Inventory 1987-1990 for \$28. GPO established this price based on its incremental cost recovery pricing method. NTIS sells the same EPA title for \$45, which is based on its market demand pricing method.

Most federal agencies are not required to disseminate information for other government agencies. Instead, these agencies generally collect and disseminate information that supports their own mission and usually sell their CD-ROM titles through their own sales programs. These agencies

---

establish CD-ROM pricing methods on the basis of their interpretation of a less-defined statutory authority to disseminate information. At a minimum, most agencies can include dissemination costs in their pricing method. However, agencies have different views of what is included in these costs. For example, the United States Geological Survey (USGS) does not consider data preparation as part of dissemination costs, but as part of its data collection function, for which it receives appropriations. Thus, USGS does not include this cost in the final price of its titles. The Bureau of the Census, however, considers data preparation as part of its dissemination costs and includes this cost in its final price. As a result, Census adds about \$80 to the final price of a CD-ROM title to recover data preparation costs.

---

## Agreements

Agencies also adjust their pricing methods to accommodate dissemination agreements made with other agencies or private companies. For example, the National Institute for Science and Technology (NIST) produces CD-ROM titles for the Internal Revenue Service, the Federal Bureau of Investigation, or Census. Although NIST sells these discs through its own sales program, it does not use its standard pricing method, but rather calculates the final price of these titles based on each respective agency's pricing method.

Any agency can also establish agreements with other agencies to sell products at lower prices than normal to remain competitive. For example, NTIS made an agreement with the Department of Health and Human Services (HHS) to sell its National Health Interview Survey, 1987 for \$13. NTIS believed this price was below both market demand and its marginal costs for reproducing and disseminating this product. However, since HHS decided to contract with GPO, which sold the title for \$13, NTIS was willing to match this price in order to continue providing dissemination services to HHS.

In addition, agencies establish agreements with private companies to determine pricing methods for information products. For example, NTIS forms joint venture partnerships with the private sector to develop CD-ROM titles. In these partnerships, the prices for these CD-ROM titles are jointly agreed upon by NTIS and the participating company. To date these titles have been sold through commercial vendors.

---

## Common Factors Found in Pricing Methods

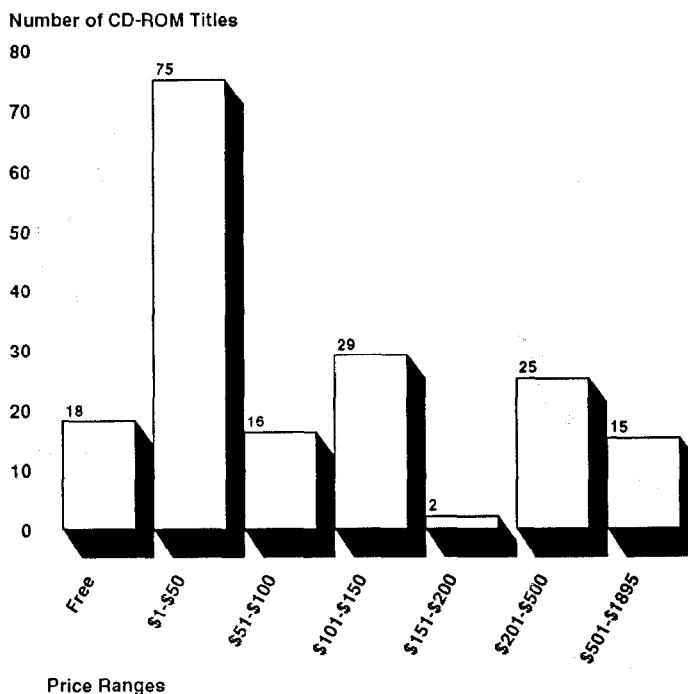
We found several common factors that are used in most of the agencies' CD-ROM pricing methods. These common factors include software, disc

replication, packaging, technical documentation, and shipping and handling costs. Appendix II contains a matrix of the various factors used in the CD-ROM pricing methods of the agencies we reviewed.

## CD-ROM Prices Range Widely in the Federal Government

CD-ROM prices vary dramatically governmentwide. Of the 181 CD-ROM titles identified in our review, prices ranged from free to \$1,895. Our evaluation showed that the greatest number of these titles (52 percent) were priced at \$50 or less. At the other extreme, 8 percent were priced above \$500. Figure 2 shows the number of federal CD-ROM titles in selected price ranges.

Figure 2: Number of Federal CD-ROM Titles Included in List (Per Price Range)

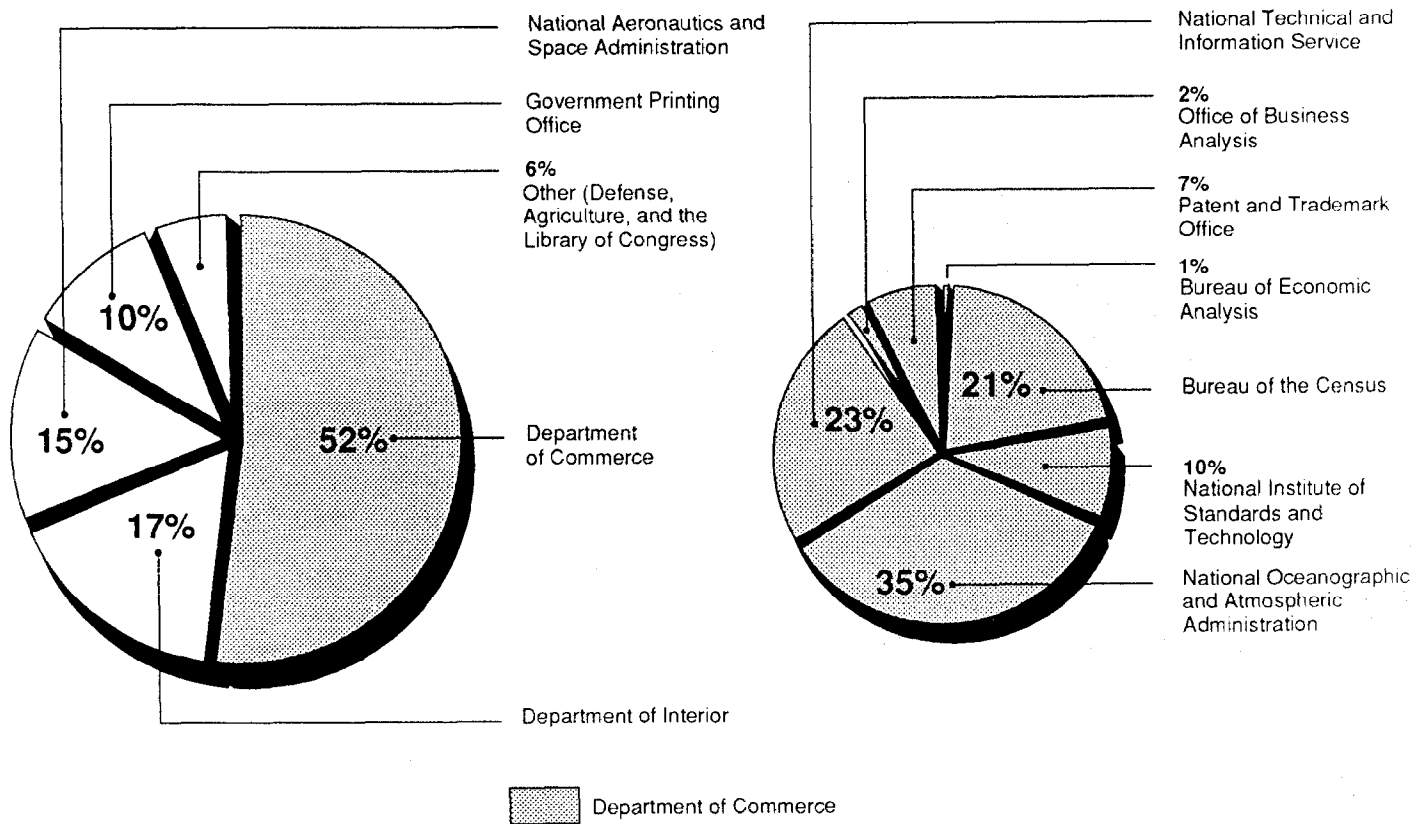


## List of Federal CD-ROM Titles Disseminated to the Public

Appendix III contains a list of over 180 federal CD-ROM titles that are disseminated to the public by the government. Experts estimate that this list represents over 90 percent of the federal CD-ROM titles available to the public. These titles cover a wide range of subjects such as the environment, demography, health, and patents.

Figure 3 shows the key federal agencies that disseminate CD-ROM titles to the public and their level of participation in this activity. As illustrated, Department of Commerce agencies disseminate over half of these federal titles.

Figure 3: Percentage of CD-ROM Titles Disseminated by Key Agencies



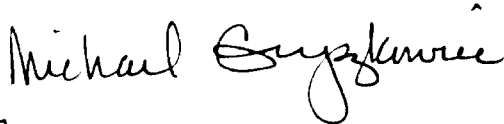


---

As agreed with your office, unless you publicly announce this report's contents earlier, we plan no further distribution until 30 days from the date of this letter. We will then send copies to other interested congressional committees, executive branch agencies, and the public. Copies will also be made available to others upon request.

Should you have any questions about this report, please contact me at (202) 512-6406. Other major contributors to this report are listed in appendix V.

Sincerely yours,

  
for Jack L. Brock, Jr.  
Director, Government Information  
and Financial Management

# Contents

Letter		1
Appendix I		10
Pricing Methods of Selected Agencies	Government Printing Office	10
	National Technical Information Service	12
	Bureau of the Census	16
	United States Geological Survey	18
	National Oceanic and Atmospheric Administration	21
Appendix II		25
Factors in Agency CD-ROM Pricing Methods		
Appendix III		26
Federal Cd-Rom Titles		
Appendix IV		35
Objectives, Scope, and Methodology		
Appendix V		36
Major Contributors to This Report		
Table	Table III.1: List of Federal CD-ROM Titles	26
Figures	Figure 1: 1985 Congressional Record	2
	Figure 2: Number of Federal CD-ROM Titles Included in List	5
	Figure 3: Percentage of CD-ROM Titles Disseminated by Key Agencies	6
	Figure I.1: Factors and Costs GPO Uses to Price CD-ROM Titles	11
	Figure I.2: Factors and Costs NTIS Uses to Price CD-ROM Titles	15
	Figure I.3: Factors and Costs Census Uses to Price CD-ROM Titles	17
	Figure I.4: Factors and Costs USGS Uses to Price CD-ROM Titles	20

---

**Contents**

---

Figure I.5: Factors and Costs NOAA Uses to Price CD-ROM Titles	23
Figure II.1: Common Factors Found in Agency CD-ROM Pricing Methods	25

---

**Abbreviations**

CD-ROM	compact disc-read only memory
EPA	Environmental Protection Agency
GAO	General Accounting Office
GPO	Government Printing Office
HHS	Health and Human Services
IMTEC	Information Management and Technology Division
NAL	National Agricultural Library
NASA	National Aeronautics and Space Administration
NIST	National Institute of Standards and Technology
NLM	National Library of Medicine
NOAA	National Oceanic and Atmospheric Administration
NTIS	National Technical Information Service
PTO	Patent and Trademark Office
USGS	United States Geological Survey

---

# Pricing Methods of Selected Agencies

---

This appendix contains detailed information on five agencies' CD-ROM pricing methods. We selected these agencies because they actively disseminate CD-ROM titles to the public and exemplify the various methods agencies use to price CD-ROM titles. This information is based on agency documents and interviews with agency officials. We did not attempt to evaluate the effectiveness or efficiency of agency pricing methods. We incorporated the factors and costs exactly as the agencies provided them to us.

---

## Government Printing Office

GPO's mission is to provide or procure printing services and distribute or sell government publications. GPO distributes or sells these publications, including books, microfiche, magnetic tapes, floppy diskettes, and CD-ROMS through its Superintendent of Documents.

---

## GPO's CD-ROM Services Provided to Other Agencies

GPO's CD-ROM production and distribution services may be performed in-house or procured as appropriate. GPO's CD-ROM production services include data capturing, coding, and converting; customizing retrieval software programs; premastering; preparing prototype (write-once) discs; mastering; and replication. GPO also offers production services for CD-ROM documentation, manuals, and packaging. GPO's distribution services include disseminating CD-ROM titles through its sales program, and when applicable, to the Federal Depository Libraries. Finally, GPO provides agencies with marketing and promotional services and customer support.

---

## GPO's Pricing Policy

Title 44 of the U.S. Code states that prices of government publications should be based on the costs determined by the head of GPO plus 50 percent. Accordingly, GPO prices publications to include the incremental costs associated with the reproduction and distribution of publications and adds a 50-percent surcharge. GPO returns excess revenue incurred from the sales of publications to the Treasury.

GPO's pricing policy is applied to all of its information products with no distinction for CD-ROMS. This pricing policy requires that GPO charge the incremental costs of reproducing and distributing a publication. Reproduction costs that are recovered by GPO include software license fees, disc replication, user manuals, packaging, and labeling. Distribution costs that are recovered by GPO include postage and handling. GPO is also required to add a 50-percent surcharge to its CD-ROM prices. The proceeds gained from this 50-percent surcharge are applied to offset costs not

**Appendix I  
Pricing Methods of Selected Agencies**

recovered through product pricing, such as marketing, unsalable stock, and some overhead expenses.

While the factors used to determine the price of a CD-ROM title sold by GPO are constant, the actual costs for an individual title vary with the specific product requirements, such as the type of user manual or packaging. Thus, the final prices of these titles vary. However, the most significant cost factor is whether the disc contains proprietary software licensed by GPO. In such instances, GPO adds about \$15 to the final price of the CD-ROM title. Figure I.1 contains typical factors and costs used to calculate the price of a CD-ROM title that does not contain proprietary software.

**Figure I.1: Factors and Costs GPO Uses to Price CD-ROM Titles**

Disc replication, including jewel box	\$2.00	
Manual/Documentation	1.00	
Labels and padded bag	.25	
Handling (includes staff time to take and fill orders, and overhead for managing this staff)	5.33	
Postage (1st class)	1.44	
Total Costs		\$10.02
50-percent surcharge		5.01
Total (rounded)		<u>\$15.00</u>

**CD-ROM Titles  
Disseminated by GPO**

GPO disseminates 18 CD-ROM titles to the public. Eight of these titles are sold for less than \$20, eight of the titles cost between \$21 and \$30, and the remaining two titles cost between \$31 and \$40. For more information on the CD-ROM titles disseminated by GPO, see appendix III.

---

## National Technical Information Service

NTIS' mission is to collect and disseminate scientific and technical information, computer software, data files, and intellectual properties generated by and for the government and foreign sources. Traditionally, federal agencies voluntarily submitted their scientific, technical, and engineering information to NTIS for dissemination. However, federal agencies are now required by the American Technology Preeminence Act of 1991 to transfer this information to NTIS for dissemination. NTIS sells the material it acquires in various media including paper, microfiche, audiovisual tape, magnetic tapes, floppy diskettes, and CD-ROMS.

---

## NTIS' CD-ROM Services Provided to Other Agencies

NTIS' CD-ROM services include marketing and distribution, complete CD-ROM production, joint venture projects, and leasing data from its bibliographic database.

One form of service NTIS provides is to market and distribute CD-ROMS created by other agencies. The price for the CD-ROM title is determined by the agency that created the CD-ROM or jointly between NTIS and the agency. NTIS normally receives about 20 percent of the CD-ROM price to recover its cost for providing marketing and distribution services.

NTIS also provides agencies with electronic media production services, such as mastering and mastering. NTIS recovers costs associated with these services and these costs are included in the final price. The price for these CD-ROM titles is determined jointly between NTIS and the source agency.

In addition, NTIS forms joint venture partnerships with private sector companies to develop CD-ROM titles. In this case, NTIS recovers costs associated with the expertise and services it provides for the product's development and dissemination. NTIS and the participating company jointly agree on the prices of these titles and whether these titles will be sold by NTIS or by the private sector. To date these titles have been sold commercially.

Finally, NTIS allows vendors to lease data from its bibliographic database. These vendors use these data to create and sell CD-ROM titles. NTIS recovers the cost of maintaining its database by charging the vendor a flat fee of \$9,000 to lease a magnetic tape from the database. A vendor must also pay NTIS a royalty fee of \$500 for each CD-ROM sold with current-year data and a lesser amount for each CD-ROM sold with data from prior years. According to the Associate Director for Business Development, these fees are based

---

on what the market will bear. He added that NTIS attempts to recover the cost to create, manage, and disseminate data from the database. NTIS does not provide input into the price of commercial CD-ROM titles containing data from this database.

---

## NTIS' Pricing Policy

Title 15 of the U.S. Code requires NTIS to be self-sustaining and to recover operating costs primarily from the sales of its information products and services. NTIS prices CD-ROM titles on the basis of (1) operating and marketing costs, (2) what the market will bear, and (3) when appropriate, whatever costs the source agency wants to recover from its CD-ROM title. At the end of the fiscal year, revenue gained from the sale of products should be sufficient to offset NTIS' operating costs.

NTIS' Director and the senior Associate Directors make the pricing decisions regarding an agency's information products. In making these pricing decisions, these officials review cost and revenue plans and evaluate alternatives for reaching a financial break-even point. They also consider product characteristics, marketing conditions, and industry trends. These officials review the prices of all products on an ad hoc basis and make pricing recommendations consistent with their goal of generating sufficient revenue to offset operational costs.

CD-ROM prices have generally been established to recover the direct and indirect costs for producing and disseminating titles. The direct costs for producing and disseminating CD-ROM titles include labor and non-labor expenses. Direct labor costs are incurred when NTIS personnel charge staff time to a product. Direct non-labor costs include premastering, mastering, disc replication, printing, and postage.

Indirect costs for producing and disseminating CD-ROM titles include administrative, overhead, and allocated expenses. Administrative expenses consist of rent, utilities, management oversight, and administrative support. Examples of overhead expenses include supervision, training, and supplies. Allocated expenses, which are not tied to a particular product but are distributed among all of NTIS' products, include order processing, customer support, accounting operations, and marketing/promotion.

While NTIS' goal is to price products to recover its direct and indirect costs, this does not always occur. Other factors are also considered in setting a price, such as market demand and competition. For example, NTIS priced

---

**Appendix I**  
**Pricing Methods of Selected Agencies**

---

HHS' National Health Interview Survey, 1987 CD-ROM for \$13 (below what was needed to recover its full costs) to (1) remain competitive with GPO, which is selling the same disc at \$13; and (2) continue serving as a dissemination channel for HHS. Although NTIS is not recovering all of the costs associated with this title, it generally attempts to recover shortfalls through revenue generated from the sale of other products.

Figure I.2 contains the typical factors NTIS uses to calculate the price of a CD-ROM title for which it provides order handling and distribution services. These costs are shown for illustrative purposes only. Actual costs will vary depending on the specific requirements for each client and product.



**Appendix I  
Pricing Methods of Selected Agencies**

**Figure I.2: Factors and Costs NTIS Uses to Price CD-ROM Titles**

<b>Direct Labor Costs</b>		
Data retrieval division	\$ .01	
Office of production management	.09	
Document storage and distribution	1.00	
Document control and report branch	.47	
ID/Inventory branch	.10	
Space and property operations	.08	
<b>Total Direct Labor Costs</b>		<b>\$1.75</b>
<b>Direct Non-labor Costs</b>		
1st class postage	2.40	
Administrative printing	.02	
<b>Total Direct Non-labor Costs</b>		<b>2.42</b>
<b>Indirect Costs</b>		
Direct overhead	2.00	
Allocated processing costs:		
overhead expenses	4.00	
Allocated processing costs:		
computer operations and scheduling	.05	
computer output on microfiche	.05	
order receipt, preprocessing, and accounting	2.22	
ADP order processing	1.15	
Document identification and customer inquiry	1.35	
<b>Total Indirect Costs</b>		<b>10.82</b>
<b>Total NTIS Costs (rounded)</b>		<b><u>\$15.00</u></b>

---

CD-ROM Titles  
Disseminated by NTIS

NTIS disseminates 22 CD-ROM titles to the public. Nine of these CD-ROM titles are priced from \$13 to \$100, eight of these titles range from \$101 to \$600, and the remaining five CD-ROM titles range from \$601 to \$1,200. See appendix III for more details on these titles.

---

Bureau of the Census

The Bureau of the Census' mission is to collect, compile, and publish demographic and economic statistics. Census is responsible for taking all federal censuses, including those of population and housing, agriculture, retail and wholesale trade, service industries, and governments. Census publishes the results of these statistics for Congress, states, local governments, and the general public. This information may be published on paper publications, microfiche, magnetic tape, floppy diskettes, and CD-ROM.

---

Census' Pricing Policy

Title 13 of the U.S. Code authorizes Census to provide copies of statistical data to the public and to recover costs for these services. Census has interpreted this authority to include the dissemination of statistical data in the form of electronic information products and to recover costs associated with the data preparation, reproduction, and dissemination of these products to the general public. The proceeds from the sale of information products are used to recover the costs of disseminating the data products.

Census does not have a formal process to review its CD-ROM pricing methods. According to the Assistant Chief for User Services of the Data Users Services Division, Census' CD-ROM pricing method is based on agreements among Census organizations involved in information dissemination. However, CD-ROM prices must be approved by Census' Budget Office. With the exception of two instances, Census' CD-ROM titles are sold at a standard price of \$150, which allows for the recovery of the staff time and supplies associated with (1) data preparation, which involves restructuring a file from tape format to CD-ROM format; (2) reserve to recover depreciation for mastering machines; (3) reproduction (mastering and disc replication); (4) documentation; (5) administrative overhead; (6) shipping; and (7) customer support.

Regarding the exceptions to its standard price, in the first instance, Census estimated that 600 copies of a CD-ROM title would be sold. When only 100 copies were sold, it lowered the price of this title to increase sales. In the second instance, Census produced a CD-ROM title that included digitized

**Appendix I  
Pricing Methods of Selected Agencies**

data of the entire country. Since this data set was complex and required more time than other data sets to restructure the files, Census priced this disc at \$100 more than its standard price.

Figure I.3 contains the typical factors Census uses to calculate the price of a CD-ROM title.

**Figure I.3: Factors and Costs Census Uses to Price CD-ROM Titles**

Staff time (processing and filling orders, and customer support)	\$20.75	
Data preparation (restructuring files from tape format to CD-ROM format)	80.00	
Reserve to cover depreciation of agency's premastering equipment	6.45	
Mastering and replication (total cost is \$1,500 divided by 100 discs) <sup>a</sup>	15.00	
Technical documentation (includes production and printing of this documentation)	10.00	
Supplies (includes order forms, pens and pencils, and promotional brochures)	4.95	
Administrative overhead (includes space expenses i.e., utilities, alterations, and repairs; leases; procurement services; and services such as budget, finance, and personnel that support the mission of the Census Bureau)	7.35	
Postage/shipping	5.50	
Total		<u>\$150.00</u>

<sup>a</sup>One hundred disc copies were made for this CD-ROM title.

**Census' CD-ROM Titles**

Census offers 20 CD-ROM titles to the public. Eighteen titles are sold at the standard price of \$150.00. The two remaining titles are priced at \$50 and \$250. See appendix III for further details on these CD-ROM titles.

---

## United States Geological Survey

The mission of USGS is to provide geologic, topographic, and hydrologic information that contributes to the wise management of the nation's natural resources and that promotes the health, safety, and well-being of the people. USGS accomplishes its mission by collecting, maintaining, storing, and analyzing earth science information and distributing this information. The information products distributed by USGS include maps, books, reports, aerial photographs, and electronic products such as CD-ROMs and floppy diskettes.

---

## USGS' Pricing Policy

According to Title 43 of the U.S. Code, USGS is authorized, and in many cases required, to sell information products to at least recover dissemination costs. Accordingly, USGS prices its information products at a level sufficient to recover reproduction and distribution costs. USGS uses the proceeds from these sales to pay for printing and distribution.

During the late 1980s, USGS had a pricing policy that applied to all types of information products. However, the policy did not contain specific guidelines for pricing CD-ROM titles. At that time, CD-ROM technology was just beginning to be used in the federal sector and USGS' CD-ROM production was experimental. As a result, USGS primarily distributed its CD-ROM titles free of charge.

As USGS' CD-ROM production progressed, the agency established a CD-ROM pricing committee to develop a pricing policy for its CD-ROM titles. In January 1991, USGS adopted a CD-ROM pricing policy establishing that prices should be sufficient enough to recover (1) reproduction costs (i.e., mastering, replication, and replication) and (2) distribution costs (i.e., customer support, packaging, and postage). The committee set a standard price of \$32 per CD-ROM title. The committee stated that this price, which allowed for the full recovery of reproduction and distribution costs, was consistent with USGS' mission, its pricing policy, and with federal legislation and regulations.

The committee allows adjustments to the standard price in three instances. First, when another agency, such as GPO, masters, replicates, and/or markets the disc, USGS charges the price established by the other agency. Second, USGS prices a CD-ROM title higher than \$32 when the product contains proprietary software. Third, if a special interest group requests USGS data in a customized format, then USGS charges the group for this additional service. Any deviations from these pricing guidelines are

---

**Appendix I**  
**Pricing Methods of Selected Agencies**

---

discussed with the committee to ensure that the pricing policy is consistently applied.

The pricing policy requires that the committee monitor cost and sales trends associated with USGS' CD-ROM products. Although the committee has not reviewed its CD-ROM pricing policy, it expects to complete an evaluation this summer. Figure I.4 contains the typical factors USGS uses to calculate the price of a CD-ROM title.

**Appendix I  
Pricing Methods of Selected Agencies**

**Figure I.4: Factors and Costs USGS Uses to Price CD-ROM Titles**

Premastering (total cost is \$350.00 divided by 375 discs) <sup>a</sup>		\$ .93
Mastering (total cost is \$1,300.00 divided by 375 discs)		3.47
Replication		3.00
Production overhead (50 percent of premastering, mastering, and replication)		3.70
Distribution		
Distribution to USGS Earth Science Information Centers and other selling sites	\$ .10	
Preparing, printing, and distributing printed material describing the product	.50	
Pre-sale customer support: handling inquiries about the product and providing order forms or other printed material (5 minutes of a \$63.64 hourly salary rate) <sup>b</sup>	5.30	
Packaging, postage, and counter sales transactions: 4 minutes for packaging or handling a counter sale at \$63.64 per hour, \$0.35 for packaging materials, and \$0.55 for postage	5.14	
Disc storage	.06	
Post-sale customer support: (5 minutes of a \$63.64 hourly salary rate)	5.30	
Defective products, processing refunds, and bad debts	<u>.66</u>	
Total Distribution Costs		17.06
Additional costs: \$1.75 for a floppy diskette with information describing the CD-ROM data, \$1.50 for 50 pages of user documentation		<u>3.25</u>
Total (rounded)		<u><u>\$32.00</u></u>

<sup>a</sup>USGS copies approximately 375 discs per CD-ROM title.

<sup>b</sup>This hourly rate includes overhead (i.e., office space, management and supervision, administration, procurement, supplies, office furniture and equipment, utilities, and other services).

---

## USGS CD-ROM Titles

USGS offers 29 CD-ROM titles to the public. Four CD-ROM titles are disseminated free of charge and nineteen titles sell at the standard price of \$32. The remaining six titles range from \$20 to \$55. See appendix III for further details on these CD-ROM titles.

---

## National Oceanic and Atmospheric Administration

The mission of NOAA is to explore and chart the ocean and its living resources. It also monitors and predicts conditions in the atmosphere, issues warnings against impending destructive natural events, and manages and disseminates long-term environmental information. NOAA acquires, stores, and disseminates worldwide environmental data through a system of climatic, oceanographic, and geophysical data centers. NOAA's data centers disseminate environmental data to the general public through products such as books, reports, journals, computer-generated data summaries, floppy diskettes, magnetic tapes, and CD-ROMS.

---

## NOAA's Pricing Policy

NOAA cannot charge for products, such as weather forecasts, that primarily benefit the general public. However, according to Title 15 of the U.S. Code, NOAA is authorized to receive payment for the actual or estimated costs associated with providing products that benefit specific recipients, such as private organizations. NOAA prices most of its information products to recover the full cost of data preparation, reproduction, and dissemination. The proceeds collected from the sale of products are used by NOAA to pay for its direct costs such as labor, equipment depreciation, and supplies.

NOAA's pricing policy applies to most of the information products it disseminates. While NOAA's pricing policy does not require a standard price for information products such as CD-ROMS, it specifies the types of costs that NOAA can recover when disseminating information products. NOAA's policy allows it to recover (1) direct labor costs for data preparation, reproduction, and dissemination; (2) other direct costs such as costs for mastering and disc replication and computer charges for data selection and retrieval; and (3) indirect costs including NOAA and Department of Commerce support, future retirement pay of NOAA's commissioned officers, and General Services Administration rent charges.

The policy also allows NOAA's Comptroller to make exceptions to its pricing method in certain unique circumstances. For example, products are provided free of charge when international agreements are made between the United States and other countries. NOAA makes another exception when the recipient is entitled by law to receive such benefits

---

free of charge or at a subsidized rate. All exception decisions remain for a period of no more than 4 years unless they are renewed by the Comptroller or the Office of Management and Budget.

NOAA's pricing policy requires each organization furnishing a product or service to submit cost computation forms to the Office of the Comptroller, Financial Management Division. This division reviews the forms for accuracy, logic, and completeness of documentation and approves the final prices of products. Figure I.5 contains the typical factors NOAA uses to calculate the price of a CD-ROM title.



**Appendix I  
Pricing Methods of Selected Agencies**

**Figure I.5: Factors and Costs NOAA Uses to Price CD-ROM Titles**

Direct Labor Cost	\$2,892.79	
Includes staff time spent for: planning CD-ROM production; decompressing data received in compressed format; downloading data to CD-ROM mastering unit; editing file on CD-ROM that provides documentation for users; checking accuracy of CD-ROM prototype; creating and producing camera copy of CD-ROM label; preparing the package including the cover letter, labeling, and CD-ROM prototype, and sending the CD-ROM to the proper data center via commercial mail; consulting with CD-ROM replication facility to coordinate production of order; and monitoring steps in CD-ROM mastering process to ensure that all are executed correctly		
Leave surcharge (19.9 percent of \$2,892.79)	<u>575.67</u>	
Total Direct Labor Costs		\$3,468.46
Other Direct Costs		
Shipment of mastered CD-ROM and label to CD-ROM production plant	3.99	
Mastering and replication of 250 discs	1,500.00	
One writable CD-ROM (blank disc used for mastering)	19.40	
Depreciation for agency-owned mastering workstation (\$24,536) and CD-ROM recorder (\$8,035) = \$32,571 divided over a 5-year life cycle = \$6,514.20 and divided by 10 CD-ROM titles per year	<u>651.42</u>	
Total Other Direct Costs		2,174.81
Distributed Indirect Costs		
Employer's contribution surcharge (18.3 percent of total direct labor costs)	634.73	
NOAA support to data center (49.9 percent of total direct labor costs)	1,730.76	
Rent (7 percent of total direct labor costs)	<u>242.79</u>	
Total Distributed Indirect Costs		2,617.29
Other:		
Department of Commerce support (0.5 percent of total direct labor, other direct, and distributed direct costs)		<u>41.30</u>
Total price of disc (total cost is \$8,301.86 divided by 250 discs)		\$33.21
Order processing charge based on time to process and fill orders		<u>11.00</u>
Total (rounded)		<u><u>\$44.00</u></u>

---

**NOAA's CD-ROM Titles**

NOAA offers 33 CD-ROM titles to the public. One NOAA CD-ROM title is disseminated free of charge, fifteen titles are sold for prices ranging from \$32 to \$100, nine titles are sold for prices between \$101 and \$200, the remaining eight titles range from \$201 to \$590. See appendix III for more details on these CD-ROM titles.

# Factors in Agency CD-ROM Pricing Methods

The matrix below illustrates the common factors used in the CD-ROM pricing methods of the agencies we reviewed. These common factors include software, disc replication, packaging, technical documentation, and shipping and handling costs.

Figure II.1: Common Factors Found in Agency CD-ROM Pricing Methods

Factors	Agencies									
	Census	GPO	NAL <sup>a</sup>	NASA	NIST	NLM <sup>b</sup>	NOAA	NTIS	PTO	USGS
Data Preparation	•				•		•			
Premastering							•	•	•	•
Mastering	•			•	•		•	•	•	•
Replication	•	•		•	•		•	•	•	•
Documentation	•	•		•	•		•	•	•	•
Packaging	•	•		•	•		•	•	•	•
Overhead	•	•			•		•	•	•	•
Shipping and Handling	•	•		•	•		•	•	•	•
Equipment Depreciation	•						•			
Customer Support	•			•	•					•
Market Demand					•			•		
Software Applications	•	•		•	•		•	•	•	
Advertising/Marketing	•				•			•		
Defective Products										•
Inventory/Storage					•			•		•

<sup>a</sup>NAL disseminates its disc free of charge.

<sup>b</sup>NLM titles are sold through GPO and are subject to GPO's pricing method.

# Federal CD-ROM Titles

This list identifies the vendor name (agency actually selling the title), the source name (agency that originally collected the data), title of the CD-ROM, and the minimum price one could pay per title. (The minimum price is the lowest price one could pay for a single issue or one-time issue. For example, NOAA sells a CD-ROM title that is comprised of six discs. While the entire six-disc set can be purchased for \$88.00, a single disc can be purchased for \$33.00.)

To obtain further information on a CD-ROM title, contact the vendor agency listed below.

Army Corps of Engineers (800) 345-9569  
 Bureau of Economic Analysis (202) 254-6630  
 Census (301) 763-4100  
 Department of the Army (800) 345-9569  
 Department of the Navy (904) 452-1288  
 GPO (202) 783-3238  
 Library of Congress (800) 255-3666  
 NAL (301) 504-5588  
 NASA (301) 286-6695  
 Navy Fleet Material (904) 452-1288  
 NIST (301) 975-2208  
 NOAA (301) 443-8330  
 NTIS (703) 487-4650  
 Office of Business Analysis (202) 482-1986  
 Patent and Trademark Office (703) 305-5652  
 USGS (800) USA-MAPS

**Table III.1: List of Federal CD-ROM Titles**

Vendor Name	Source Name	Title	Minimum Price Per Title
NASA/Ames Research Center	NASA/Ames	Airborne Arctic Stratospheric Expedition (2-disc set)	\$0.00
NASA/Ames Research Center	NASA/Ames	Airborne Arctic Stratospheric Expedition II	\$0.00
NOAA	USGS/NOAA Joint Office for Mapping and Research	High Resolution Bathymetry & Selected Geoscience Data	\$0.00
NASA/Jet Propulsion Laboratory (JPL)	NASA Ocean Data System	West Coast Time Series Coastal Zone Color Scanner Imagery	\$0.00
NASA/Goddard Space Flight Center	NASA/Goddard	Collected Data of the First ISLSCP Field Experiment (Prototype, Vol. 2 & 4)	\$0.00
NASA/Goddard Space Flight Center	NASA/Goddard	The International Satellite Cloud Climatology Project Data	\$0.00

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
NASA/Goddard Space Flight Center	NASA/Goddard	The Greenhouse Effect Detection Experiment (2-disc set)	\$0.00
NASA/Jet Propulsion Laboratory	NASA/JPL	Tropical Ocean Global Atmosphere Data	\$0.00
NASA/Ames Research Center	NASA/Ames	Stratosphere - Troposphere Exchange Project	\$0.00
NASA/Ames Research Center	NASA/Ames	Airborne Antarctic Ozone Experiment	\$0.00
Navy Fleet Material Support Office	Department of the Navy	Navy Logistics Library	\$0.00
NAL	NAL	Aquaculture II	\$0.00
NIST	NIST	Product Data Hyperstandard - Prototype	\$0.00
USGS	USGS/Geologic Division	Antarctic Multichannel Seismic Reflection Data - U.S. Data	\$0.00
USGS	USGS/Geologic Division	Gridded Geophysical Gravity & Magnetism Data	\$0.00
USGS	USGS/Geologic Division	Monterey Bay Regional Sampler	\$0.00
NASA/Jet Propulsion Laboratory	NASA/JPL	Bonanza Creek Experimental Forest, Alaska, March 1988 Vol. 1 & 2 (2-disc set)	\$0.00
USGS	USGS/National Mapping Division	Digital Orthophoto Demonstration	\$0.00
NTIS	National Center for Health Statistics	National Health Interview Survey, 1987	\$13.00
GPO	National Center for Health Statistics	National Health Interview Survey, 1987	\$13.00
GPO	National Center for Education Statistics	Schools and Staffing Survey, 1987-88	\$14.00
GPO	National Center for Health Statistics	National Health Interview Survey, 1988	\$15.00
GPO	Environmental Protection Agency	Air CHIEF (air data)	\$15.00
GPO	Environmental Protection Agency	EPADOC (contracts and manuals)	\$15.00
GPO	National Library of Medicine	Entrez: Sequences (DNA and Protein data) (2-disc set)	\$16.00
GPO	National Library of Medicine	National Center for Biotechnology Information - Sequences (ASN.1)	\$17.00
GPO	National Library of Medicine	National Center for Biotechnology Information - GenBank (Flat File)	\$17.00
USGS	USGS/Geologic Division	National Earthquake Information Center Earthquake Digital Data (9-disc set)	\$20.00
NASA/National Space Science Data Center (NSSDC)	NASA/Goddard	Total Ozone Mapping Spectrometer Update	\$22.50
NASA/National Space Science Data Center	NASA/Goddard	Total Ozone Mapping Spectrometer Gridded Ozone Data	\$22.50

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
NASA/National Space Science Data Center	NASA/Goddard	Total Ozone Mapping Spectrometer Ozone Image Data	\$22.50
NASA/National Space Science Data Center	NASA/JPL	Infrared Thermal Mapper/Mission to Mars	\$22.50
GPO	National Center for Education Statistics	National Postsecondary Student Aid Study, 1986-87	\$23.00
GPO	National Center for Education Statistics	National Postsecondary Student Aid Study, 1989-90	\$23.00
GPO	National Center for Education Statistics	High School and Beyond 1980-86 (data about high school students, etc.)	\$23.00
GPO	Occupational Safety & Health Administration (OSHA)	OSHA Regulations, Documents, and Technical Information	\$28.00
GPO	Environmental Protection Agency	Toxic Release Inventory (1987-1990)	\$28.00
USGS	USGS/National Mapping Division	Northern Great Plains Advanced Very High Resolution Radiometer Data	\$28.00
GPO	Office of the Law Revision Council, U.S. House of Representatives	U.S. Code on CD-ROM, as of Jan. 2, 1991	\$30.00
GPO	Bureau of Labor Statistics	Occupational Outlook Handbook	\$30.00
GPO	Center for Disease Control	Chronic Disease Prevention File	\$30.00
NASA/National Space Science Data Center	NASA/JPL	Voyager Spacecraft to the Outer Planets (Vol. 1-12)	\$31.50
NASA/National Space Science Data Center	NASA/JPL	Viking Orbiter Images of Mars	\$31.50
NASA/National Space Science Data Center	USGS/Geologic Division	Mars Digital Image Map	\$31.50
NASA/National Space Science Data Center	University of Maryland	International Halley Watch	\$31.50
NASA/National Space Science Data Center	Magellan Data Products Support Office	Pre-Magellan/Data from the Magellan Project & the Planetary Data System	\$31.50
NASA/National Space Science Data Center	NASA/JPL	Magellan - the Altimetry and Radiometry Composite Data Records	\$31.50
NASA/National Space Science Data Center	Magellan Data Product Support Office	Magellan: Mosaic Image Data Record/Venus Data	\$31.50
NASA/National Space Science Data Center	NASA/JPL	Magellan - The Global Data Records	\$31.50
NASA/National Space Science Data Center	NASA/JPL	Galileo Cruise Imaging on CD-ROM (Vol. 2-6)	\$31.50
NASA/National Space Science Data Center	Smithsonian Astrophysics Observatory	Einstein Observatory CD-ROM (2-disc set)	\$36.50

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
USGS	USGS/Geologic Division	Geologic Long Ranged Inclined Asdic (GLORIA) Imagery and Bathymetry off Washington, Oregon, and California (earth science data)	\$32.00
USGS	USGS/Geologic Division	Photographs of Natural Hazards	\$32.00
USGS	USGS/National Mapping Division	Side-Looking Airborne Radar (various geographic areas)	\$32.00
NOAA	NOAA/National Oceanographic Data Center	GEOSAT Altimeter Crossover Difference from the Geodetic Mission	\$32.00
USGS	USGS/Geologic Division	National Uranium Resource Evaluation, Western U.S.	\$32.00
USGS	USGS/Water Resources Division	State Water-Data Reports - Hydrologic Records for 1990 Water	\$32.00
USGS	USGS/Water Resources Division	State Water-Data Reports - Hydrologic Records of 1990 & 1991	\$32.00
USGS	USGS/Geologic Division	Deep Seismic Reflection Studies in Pacific N.W.	\$32.00
USGS	USGS/Geologic Division	Digitized Strong Motion Accelerograms of North & Central America	\$32.00
USGS	USGS/National Mapping Division	1990 Conterminous U.S. Advanced Very High Resolution Radiometer Bi-Weekly Composites	\$32.00
USGS	USGS/National Mapping Division	1991 Conterminous U.S. Advanced Very High Resolution Radiometer Bi-Weekly Composites	\$32.00
USGS	USGS/Geologic Division	Digital Recordings of Aftershocks of October 17, 1989, Loma Prieta, California	\$32.00
USGS	USGS/Geologic Division	Geology of Nevada	\$32.00
USGS	USGS/National Mapping Division	1:100,000 - Scale Digital Line Graph Data	\$32.00
USGS	USGS/National Mapping Division	1:2,000,000 - Scale Digital Line Graph Data	\$32.00
USGS	USGS/Geologic Division	National Petroleum Reserve in Alaska-SEG-Y Data	\$32.00
USGS	USGS/Geologic Division	National Energy Research Seismic Library (2 volumes)	\$32.00
USGS	USGS/Geologic Division	Sampler of Digital Rock Core Information from the Core Research	\$32.00
USGS	USGS/Geologic Division	Joint Education Initiative Sampler - Introduction to Remote Sensing	\$32.00
USGS	USGS/Geologic Division	Stratigraphic Nomenclature D-bases for U.S., Possessions & Territories	\$32.00
USGS	USGS/Geologic Division	MASSBAY - A Geologic Map of the Sea Floor in West Mass. Bay	\$32.00
USGS	USGS/Geologic Division	USGS/National Geophysics Information Center Geomagnetic Observatory Data-1990	\$33.00
USGS	USGS/Geologic Division	USGS/National Geophysics Information Center Geomagnetic Observatory Data-1991	\$33.00

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
GPO	General Services Administration (GSA)	GSA Federal Acquisition Regulation/Federal Information Resources Management Regulation (procurement and regulations data)	\$33.00
NOAA	NOAA/National Oceanographic Data Center	GEOSAT Altimeter Data (GEM-T2 geophysical data records) from the Exact Repeat Mission	\$33.00
NTIS	Office of Business Analysis	National Trade Data Bank (trade and export data)	\$35.00
Office of Business Analysis	Office of Business Analysis	National Trade Data Bank (trade and export data) (2-disc set)	\$35.00
Bureau of Economic Analysis	Bureau of Economic Analysis	Regional Economic Information System	\$35.00
NASA/National Space Science Data Center	NASA/JPL	Outer Planets Fields & Particles Data (2-disc set)	\$37.50
NASA/National Space Science Data Center	NASA/NSSDC	Selected Astronomical Catalogs, Volume I (2-disc set)	\$37.50
GPO	U.S. Congress	Congressional Record, Vol. 131, 1985, Proceedings (2-disc set)	\$40.00
PTO	PTO	Sample Patent Image	\$40.00
NOAA	NOAA/National Oceanographic Data Center	GEOSAT Altimeter Data from the Geodetic Mission, 30 to 72 degrees S	\$44.00
NTIS	Environmental Protection Agency	Toxic Release Inventory, 1987-1989	\$45.00
NTIS	Environmental Protection Agency	Toxic Release Inventory 1987-1990	\$45.00
NOAA	NOAA/National Geophysical Data Center	Geologic Long Ranged Inclined Asdic (GLORIA) - Monterey Bay Regional Sampler (earth science data)	\$45.00
NASA/National Space Science Data Center	California Institute of Technology	Infrared Astronomical Satellite Sky Survey Atlas (4-disc set)	\$49.50
NTIS	NASA	Planetary Image Videodisc, Vol. 1 (laser disc)	\$50.00
NTIS	NASA	Planetary Image Videodisc, Vol. 2 (laser disc)	\$50.00
USGS	USGS/Geologic Division	Global Hypocenter Data Base CD-ROM version 2	\$50.00
USGS	USGS/Geologic Division	Hypocenter Associated Data CD-ROM	\$50.00
Census	Census	Export Commodity Classification (Schedule B)	\$50.00
USGS	USGS/Geologic Division	USGS/National Geophysics Information Center Geomagnetic Observatory Data 1985-89	\$55.00
NOAA	NOAA/National Geophysical Data Center	Gulf of Mexico Geologic Long Ranged Inclined Asdic (GLORIA) Data (earth science data)	\$56.00
NOAA	NOAA/National Geophysical Data Center	NOAA and Minerals Management Service Marine Minerals CD-ROM Data Set	\$56.00
NOAA	NOAA/National Climatic Data Center	U.S. Navy Marine Climatic Atlas of the World	\$61.00

(continued)



**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
NOAA	NOAA/National Climatic Data Center	International Station Meteorological Climate Summary Version 2	\$61.00
NOAA	NOAA/National Climatic Data Center	Historical U.S. Climate Data Ver. 1.0	\$61.00
NOAA	NOAA/National Climatic Data Center	National Climate Information Disc Vol. (drought data up to 1988)	\$61.00
NOAA	NOAA/National Geophysical Data Center	Experimental Calibrated Global Vegetation Index	\$70.00
NOAA	NOAA/National Geophysical Data Center	Geophysical Data System: Worldwide Marine Geophysical Data and Update (2-disc set)	\$75.00
NOAA	NOAA/National Oceanographic Data Center	Global Ocean Temperature and Salinity Profiles	\$80.00
NTIS	Office of Business Analysis	National Economic, Social, and Environmental Data Bank	\$95.00
Office of Business Analysis	Office of Business Analysis	National Economic, Social, and Environmental Data Bank	\$95.00
NTIS	Foreign Agricultural Service	Special Collection: Forest Service Photographs (12" disc)	\$98.00
NOAA	NOAA/National Geophysical Data Center	Global Ecosystems Data	\$100.00
NOAA	NOAA/National Geophysical Data Center	Global Relief CD-ROM (topography data)	\$100.00
NTIS	NIST	Defense Advanced Research Projects Agency TIMIT Acoustic-Phonetic Continuous Speech Corpus	\$100.00
NOAA	NOAA/National Geophysical Data Center	Geologic Long Ranged Inclined Asdic (GLORIA) - East Coast (side-scan sonar image data) (2-disc set)	\$101.00
NOAA	NOAA/National Geophysical Data Center	Deep Sea Drilling Project and Ocean Drilling Program CD-ROM Set (4-disc set)	\$102.00
NOAA	NOAA/National Geophysical Data Center	Solar Radio Bursts	\$111.00
NOAA	NOAA/National Climatic Data Center	International Station Meteorological Climate Summary Version 3	\$111.00
NOAA	NOAA/National Climatic Data Center	Global Tropical/ Extratropical Cyclone Climatic Atlas	\$111.00
NOAA	NOAA/National Geophysical Data Center	National Geophysical Data Center - 05/1: Solar Variability Affecting Earth	\$111.00
NOAA	NOAA/National Geophysical Data Center	Flares in Hydrogen-Alpha	\$111.00
NOAA	NOAA/National Geophysical Data Center	Regions of Solar Activity	\$111.00
NTIS	NIST	TI46-word Speaker-Dependent Isolated Word Corpus, CD 7-1.1	\$125.00

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
Census	Census	Census Summary Tape File 1A	\$150.00
Census	Census	Census Summary Tape File 1B Extract	\$150.00
Census	Census	Census Summary Tape File 1C	\$150.00
Census	Census	Census Summary Tape File 3A	\$150.00
Census	Census	Census Summary Tape File 3C (2-disc set)	\$150.00
Census	Census	Census P.L. 94-171 Data	\$150.00
Census	Census	Economic Census Data 1987	\$150.00
Census	Census	County Business Patterns	\$150.00
Census	Census	American Housing Survey, 1985-1989 and Metropolitan Statistical Areas 1988-1989	\$150.00
Census	Census	Agriculture Specialty Publications and 1987 Public Use Files	\$150.00
Census	Census	U.S. Exports of Merchandise on CD-ROM	\$150.00
Census	Census	U.S. Imports of Merchandise on CD-ROM	\$150.00
Census	Census	American Housing Survey 1984-87 Data	\$150.00
PTO	PTO	Technology Set - Genetic Engineering (5-disc set)	\$150.00
PTO	PTO	Technology Set - Acid Rain (5-disc set)	\$150.00
Census	Census	Current Population Survey 1988-1990, 1989-1991, and 1990-1992	\$150.00
Census	Census	1987 Census of Agriculture	\$150.00
Census	Census	U.S.A. Counties	\$150.00
Census	Census	County and City Data Book, 1988	\$150.00
Census	Census	Census/Equal Employment Opportunity Special File	\$150.00
PTO	PTO	Additional Support and Information Search Tools (ASIST) (patent data) (4-disc set)	\$161.00
NOAA	NOAA/National Operational Hydrological Remote Sensing Center	Airborne and Satellite Snow Data	\$200.00
NOAA	NOAA/Space Environment Library	Geosynchronous Operational Environmental Satellite Space Environment Data	\$203.00
NOAA	NOAA/National Geophysical Data Center	Neutron Monitor Data	\$203.00
PTO	PTO	Classification and Search Support Information System/ Bibliographic Information (CASSIS/BIB) (patent data) (6-disc set)	\$210.00
PTO	PTO	Classification and Search Support Information System/Patent Assignment Information (CASSIS/ASIGN) (patent data) (4-disc set)	\$210.00
PTO	PTO	Classification and Search Support Information System/Classifications Information (CASSIS/CLASS) (patent data) (6-disc set)	\$210.00

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
NOAA	NOAA/National Climatic Data Center	Global Upper Air Climatic Atlas Vol. 1 (2-disc set)	\$211.00
NOAA	NOAA/National Climatic Data Center	The Global Daily Summary System Vol. 1 (Daily Temp. & Precipitation) (2-disc set)	\$211.00
Library of Congress	Library of Congress	CD Machine Readable Cataloging (CDMARC) English Only Edition (4-disc set)	\$225.00
Department of the Army	Army	CD-1, Army Publications	\$241.80
Army Corps of Engineers	Army	Corps of Engineers Publications (3-disc set)	\$241.80
NIST	NIST	NIST Structured Forms Reference Set of Binary Images	\$250.00
NIST	NIST	NIST Structured Forms Reference Set of Binary Images II	\$250.00
NTIS	NIST	NTIMIT Telephone Network Acoustic-Phonetic Continuous Speech Corpus (2-disc set)	\$250.00
NIST	NIST	NIST 8-Bit Gray Scale Images of Fingerprint Image Group	\$250.00
Census	Census	TIGER/Line (1990 Census version)	\$250.00
NOAA	NOAA/National Geophysical Data Center	Minnesota Aeromagnetism Data, Vol. 1 & 2	\$277.00
NOAA	NOAA/National Geophysical Data Center	Gravity; Earth System Data	\$277.00
NOAA	NOAA/National Climatic Data Center	Solar and Meteorological Surface Observational Network (3-disc set)	\$311.00
NTIS	Pentagon Library	Defense Library on Disc	\$340.00
Library of Congress	Library of Congress	CD Machine Readable Cataloging (CDMARC) Subjects (Library of Congress catalog)	\$345.00
Library of Congress	Library of Congress	CD Machine Readable Cataloging (CDMARC) Serials (Library of Congress catalog)	\$395.00
NTIS	NIST	Defense Advanced Research Projects Agency Resource Management Continuous Speech Database Speaker - Dependent Training (2-disc set)	\$403.00
NTIS	Foreign Agricultural Service	Photographic Collection of the U.S. Department of Agriculture (12" disc & 47 floppy)	\$448.00
Library of Congress	Library of Congress	CD Machine Readable Cataloging (CDMARC) Names (Library of Congress catalog) (4-disc set)	\$460.00
Department of the Navy	Navy	Department of Defense Hazardous Materials Information System/Hazardous Materials and Control Management Disc (8-disc set)	\$500.00
NTIS	NIST	Road Rally Conversational Speech Corpora	\$500.00
Library of Congress	Library of Congress	CD Machine Readable Cataloging (CDMARC) Bibliographic (Library of Congress catalog) (7-disc set)	\$560.00
NOAA	NOAA/National Geophysical Data Center	Geophysics of North America National Geophysical Data Center-02	\$590.00

(continued)

**Appendix III  
Federal CD-ROM Titles**

<b>Vendor Name</b>	<b>Source Name</b>	<b>Title</b>	<b>Minimum Price Per Title</b>
NTIS	NIST	Defense Advanced Research Projects Agency Air Travel Information System Spontaneous Speech Pilot Corpus and Relational Database	\$600.00
NTIS	NIST	Defense Advanced Research Projects Agency Air Travel Information System Read Versions of Spontaneous Data and Adaption Data	\$600.00
NTIS	NIST	Defense Advanced Research Projects Agency Extended Resource Management Continuous Speech Speaker-Dependent Corpus (RM2) (2-disc set)	\$603.00
NTIS	NIST	Defense Advanced Research Projects Agency Resource Management Continuous Speech Database (RM1) Speaker-Independent	\$653.00
Library of Congress	Library of Congress	CD Machine Readable Cataloging (CDMARC) Names and Subjects (Library of Congress catalog combination of two titles) (5-disc set)	\$690.00
NTIS	NIST	Studio Quality Speaker - Independent Connected-Digit Corpus (3-disc set)	\$750.00
NTIS	NIST	Defense Advanced Research Projects Agency Resource Management Continuous Speech DB (RM1) Development Test & Evaluation	\$753.00
NIST	NIST	NIST Binary Images of Printed Digits, Alphas, and Text	\$895.00
NIST	NIST	NIST Binary Images of Handwritten Segmented Characters	\$895.00
NIST	NIST	Test Data 1: Binary Images of Handprinted Segment Characters	\$1,000.00
NIST	NIST	NIST Scoring Package Release 1.1 (SP)	\$1,150.00
NTIS	NIST	Defense Advanced Research Projects Agency Air Travel Information System Speaker-Dependent Training Data (4-disc set)	\$1,200.00
NIST	NIST	NIST Machine Print Database of Gray Scale and Binary Images (3-disc set)	\$1,895.00

# Objectives, Scope, and Methodology

---

In August 1992, the Government Information, Justice, Transportation and Agriculture Subcommittee, House Committee on Government Operations, asked us to determine (1) how selected federal agencies establish their CD-ROM prices and (2) how much they charge for the CD-ROM titles. We were also asked to develop a list of federal CD-ROM products, which at a minimum included federal CD-ROM titles disseminated by the agencies we reviewed.

In addition to specific agencies identified by the requestor, we selected other agencies that have a range of CD-ROM prices and disseminate a significant amount of CD-ROM titles to the public. We identified these agencies through discussions with leading industry experts familiar with federal CD-ROM titles and evaluations of federal and commercial listings of CD-ROM titles. We also used information obtained during a symposium and conference concerning CD-ROM technology in the federal government.

We reviewed the CD-ROM pricing methods and prices of GPO, Census, NLM, NASA, NAL, NOAA, NTIS, NIST, PTO, and USGS. To ensure that we obtained accurate data from these agencies, we developed a data collection instrument that was evaluated by knowledgeable officials involved in CD-ROM legislation and production. We did not evaluate the effectiveness or efficiency of agency pricing methods.

We created a list of federal CD-ROM titles that are disseminated to the public. To develop this list, we used an electronic version of a CD-ROM compendium<sup>1</sup> and other listings of federal and commercial CD-ROM titles. We analyzed the data in these documents and determined which federal titles are disseminated to the public by agencies. We used information collected from agencies to verify that our list is current and accurate. Knowledgeable authorities involved in federal CD-ROM activities estimated that our list contains over 90 percent of the titles disseminated by the federal government.

Our audit work was conducted between September 1992 to June 1993 in Washington, D.C.; Beltsville, Bethesda, Gaithersburg, Greenbelt, and Suitland, Maryland; and Reston and Springfield, Virginia.

---

<sup>1</sup>The U.S. Government Printing Office produced the SIGCAT CD-ROM Compendium, April 1992.

---

# Major Contributors to This Report

---

Information  
Management and  
Technology Division,  
Washington, D.C.

Mark E. Heatwole, Assistant Director  
Margaret W. Price, Evaluator-in-Charge  
Yvette Ramos, Computer Scientist

---

### Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

**Orders by mail:**

**U.S. General Accounting Office  
P.O. Box 6015  
Gaithersburg, MD 20884-6015**

**or visit:**

**Room 1000  
700 4th St. NW (corner of 4th and G Sts. NW)  
U.S. General Accounting Office  
Washington, DC**

**Orders may also be placed by calling (202) 512-6000  
or by using fax number (301) 258-4066.**

---

**United States  
General Accounting Office  
Washington, D.C. 20548**

**Official Business  
Penalty for Private Use \$300**

**First-Class Mail  
Postage & Fees Paid  
GAO  
Permit No. G100**

---