

GAO

Briefing Report to the Chairman,  
Subcommittee on Intellectual Property  
and Judicial Administration, Committee  
on the Judiciary, House of  
Representatives

October 1991

PATENT AND  
TRADEMARK OFFICE

Impact of Higher Patent  
Fees on Small-Entity and  
Federal Agency Users



145033

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**Resources, Community, and  
Economic Development Division**

B-245242

October 11, 1991

The Honorable William J. Hughes  
Chairman, Subcommittee on Intellectual  
Property and Judicial Administration  
Committee on the Judiciary  
House of Representatives

Dear Mr. Chairman:

In March 1991, you requested that we examine a proposal by the Patent and Trademark Office (PTO) in the Department of Commerce to restrict the 50-percent reduction in the patent fees paid by small-entity users (hereafter referred to as the current 50-percent subsidy).<sup>1</sup> PTO made its proposal in response to (1) the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508, Nov. 5, 1990), which for fiscal years 1991 through 1995 imposed a 69-percent surcharge on patent fees to make PTO essentially self-sufficient through user fees, and (2) a projected increase in revenues it will need to operate the patent system.

Specifically, you asked us for information on alternative approaches to PTO's proposal to reduce the current 50-percent subsidy for small-entity users. As agreed with your office, we obtained information on four specific alternative approaches. You also asked that we provide the views of senior patent attorneys or technology transfer officials at 10 federal agencies on the impact of the 69-percent surcharge on the technology transfer activities at federal laboratories. These 10 agencies have had the most active patent and licensing programs within the federal government during the past 10 years.

In response to your request, we briefed your office on the results of our analysis on May 7, 1991. This briefing report outlines our overall findings and observations and serves to formalize the information we presented during the briefing.

**Background on PTO's  
Proposal**

Under the Omnibus Budget Reconciliation Act, PTO must recover essentially all of its patent costs through patent user fees. This change shifted the source of funding of the 50-percent subsidy for small entities, which filed about one-third of the patent applications in fiscal year 1990, from

<sup>1</sup>See 35 U.S.C. 41(h)(1). PTO's regulations define small entities as independent inventors, nonprofit organizations, and small businesses (those with fewer than 500 employees). Large entities include businesses with at least 500 employees and government agencies.

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annual appropriations to large-entity users. To achieve a fairer distribution of fees that more closely reflect actual costs incurred by large and small entities, PTO has proposed to reduce the subsidy to small entities beginning in fiscal year 1992 by (1) retaining the 50-percent subsidy for fees associated with filing a patent application, while (2) eliminating the subsidy for fees associated with issuing and maintaining a patent.

PTO projects that it will need a total of \$778 million in patent fee revenues in fiscal years 1992 and 1993 to support rising patent system costs, particularly those associated with deploying its patent automation program. However, PTO projects that revenue under its current patent fee structure would total \$703 million, resulting in a \$75 million shortfall. Its proposed increase in small-entity fees would provide the needed additional revenue.

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## Alternatives to PTO's Subsidy Proposal

The 69-percent surcharge raised the total amount that a small entity would pay for PTO's five principal fees from \$1,975 to \$3,340.<sup>2</sup> As shown in table 1, the amount that small entities would pay for PTO's five principal fees would further increase under each of five subsidy alternatives considered, including the alternative of retaining the current 50-percent subsidy, because of PTO's projected higher expenses. Under PTO's proposal, small entities would pay almost the same fees overall as large entities to obtain and maintain protection for a patent's 17-year life. In comparison, under each of the four alternative approaches, small entities would pay lower fees while large entities would pay somewhat higher fees to obtain and maintain patent protection. Legislation changing PTO's fee structure and/or the small-entity subsidy would be required to implement each of the five alternatives.

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<sup>2</sup>These fees are for filing a patent application, issuing a patent, and maintaining a patent in force at each of three stages during its 17-year life.

**Table 1: Comparison of the Fees That Small and Large Entities Would Pay Under Five Alternatives**

Option <sup>a</sup>	Small-entity fee	Large-entity fee
Retain the 50-percent subsidy	\$3,710	\$7,420
PTO's proposal	6,365	6,680
25-percent subsidy	5,110	6,830
Limit the current 50-percent subsidy to independent inventors and nonprofit organizations <sup>b</sup>	3,535	7,070
Extend the current 50-percent subsidy to include government agencies	3,710	7,420

<sup>a</sup>Small and large entity fees were adjusted to meet PTO's projected need of \$778 million in fee revenues for fiscal years 1992 and 1993.

<sup>b</sup>Under this alternative, the small-entity definition would be modified to exclude small businesses.

According to officials of organizations representing patent owners and patent attorneys, higher PTO fees would most adversely affect independent inventors because they account for 72 percent of all small-entity applicants and are less likely than others to have the resources to pay higher patenting costs.

## Impact of Surcharge on Federal Technology Transfer Activities

Senior patent attorneys or technology transfer officials at 10 federal agencies said that the 69-percent surcharge has had a slight to moderate impact on their technology transfer activities. Among these federal agencies, the Navy is experiencing the greatest adverse impact because the higher fees have come at a time when its budget is being reduced. Officials for 8 of the 10 agencies said their agencies have tightened criteria and procedures for determining whether to (1) file a patent application on an invention and/or (2) continue to maintain a patent in force as a way of holding down costs. In particular, seven of the agencies have tightened their criteria for paying PTO's second maintenance fee, which is due 7-1/2 years after a patent is issued, by generally requiring that the patent be licensed, a license be in negotiations, or concrete evidence exists that a company is interested in licensing the patent.

## Scope and Methodology

To provide information about alternatives to PTO's proposal for limiting the small-entity subsidy, we identified in discussions with your office the following four optional approaches:

- Retaining the current 50-percent subsidy for small entities.
- Reducing the small-entity subsidy from 50 percent to 25 percent.

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- Limiting the definition of small entities to include only independent inventors and nonprofit organizations. This option would exclude small businesses.
  - Extending the 50-percent subsidy to include government agencies as well as small entities.

We then used PTO's planning model to assess the effect of alternative small-entity subsidies on PTO's fee revenues and the patent fees that large and small entities would pay. These alternative approach data are based on PTO's projected revenue need of \$778 million in fiscal years 1992 and 1993. As agreed with your office, we did not verify PTO's computer model or alter the assumptions used to generate these data. In addition, we interviewed officials of Intellectual Property Owners, Inc., and the American Intellectual Property Law Association, which represent patent owners and attorneys, about the effect of PTO's higher patent fees on large- and small-entity users.

To obtain information about the impact of PTO's higher patent fees on federal technology transfer activities, we interviewed senior federal patent attorneys or technology transfer officials at 10 federal agencies. The agencies we contacted were the Departments of Agriculture, Commerce, Air Force, Army, Navy, Energy, and the Interior; the National Aeronautics and Space Administration; the National Institutes of Health; and the Tennessee Valley Authority.

Our review was conducted between March and May 1991. We discussed the contents of this briefing report with PTO's Assistant Commissioner for Finance and Planning and Director for Long-Range Planning and Evaluation, who agreed with its technical accuracy.

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Section 1 provides more detailed information on the impact of alternatives small-entity subsidies on PTO's fee structure. Section 2 provides the views of senior officials at 10 federal agencies about the impact of PTO's higher patent fees on federal technology transfer activities.

As agreed with your office, we are sending copies of this report to the Secretary of Commerce; the Commissioner of Patents and Trademarks; and the Director, Office of Management and Budget. We will also make copies available to other interested parties upon request.

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Major contributors to this briefing report are listed in appendix I. If I can be of further assistance, please contact me at (202) 275-5525.

Sincerely yours,

A handwritten signature in cursive script that reads "John M. Ols, Jr.".

John M. Ols, Jr.  
Director, Housing and Community  
Development Issues

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## Abbreviations

GAO	General Accounting Office
PTO	Patent and Trademark Office





# The Impact of Alternative Small-Entity Subsidies on the Patent Fee Structure

## PTO's Budget Proposal for Fiscal Years 1992 and 1993

As shown in table 1.1, the Patent and Trademark Office (PTO) proposes to increase spending from \$327 million in fiscal year 1990 to \$462 million in fiscal year 1992 and \$554 million in fiscal year 1993. These higher operating costs, which will be paid almost completely by patent and trademark system users, primarily reflect anticipated increases in patent and trademark filings and the deployment of automated patent and trademark search systems.

Table 1.1: PTO's Annual Budget

	Fiscal year			
	1990 <sup>a</sup>	1991 <sup>b</sup>	1992 <sup>c</sup>	1993 <sup>c</sup>
Patent process	\$185	\$240	\$295	\$369
Trademark process	24	24	42	40
Information dissemination	52	40	53	60
Executive direction and administration	66	48	72	85
<b>Total</b>	<b>\$327</b>	<b>\$352</b>	<b>\$462</b>	<b>\$554</b>

<sup>a</sup>PTO's actual obligations.

<sup>b</sup>PTO's enacted budget.

<sup>c</sup>PTO's budget projections.

Source: PTO.

- Of PTO's obligations of \$327 million in fiscal year 1990, \$101 million, or 31 percent, was funded through appropriations and \$226 million, or 69 percent, from PTO's patent and trademark fee revenue. PTO used appropriated funds to provide a 50-percent subsidy for the patent fees paid by small-entity users (independent inventors, nonprofit organizations, and businesses with fewer than 500 employees).
- Effective on the date of its enactment, section 10101 of the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508, Nov. 5, 1990) imposed a 69-percent surcharge on PTO patent filing, issuance, and maintenance fees for fiscal years 1991 through 1995 and authorized PTO to periodically revise the surcharge as necessary up to certain annual dollar amounts. The purpose of the surcharge is to make PTO essentially self-sufficient through user fees. As a result, large entities are, in essence, subsidizing small entities through their higher patent fees. According to PTO, this subsidy amounted to about \$50 million in fiscal year 1991.
- To achieve a fairer distribution of revenues paid by large and small entities to support patent system activities, PTO proposed to restrict its current 50-percent subsidy for small entities effective October 1, 1991. PTO would continue to provide a 50-percent subsidy for nine fees associated

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with the initial filing of a patent application.<sup>1</sup> However, it would eliminate the subsidy for 16 subsequent fees associated with issuing a patent; the first maintenance fee, which would be paid 3-1/2 years after issuance; the second maintenance fee, which would be paid 7-1/2 years after issuance; and the third maintenance fee, which would be paid 11-1/2 years after issuance.

- PTO's objectives in reducing the small-entity subsidy are to:
  1. Make its revenue from large and small entities more closely reflect the actual costs that each group incurs.
  2. Increase its revenues by \$34 million and \$41 million in fiscal years 1992 and 1993, respectively. Revenues from the higher small-entity fees would not be used to reduce the fees paid by large entities; rather, PTO projects that it will need these revenues to meet its 2-year revenue requirement of \$778 million to support its planned patent system activities.

**Patent Applications**  
**Filed in Fiscal Year**  
**1990**

Table 1.2 shows the number of patent applications filed by large and small entities in fiscal year 1990.

**Table 1.2: Patent Applications Filed in Fiscal Year 1990 by Applicant Category**

Category	U.S. origin	Percent	Foreign origin	Percent	Total	Percent
Large entities	51,839	30.6	60,804	35.8	<b>112,643</b>	66.4
Small entities	43,040	25.4	13,950	8.2	<b>56,990</b>	33.6
<b>Total</b>	<b>94,879</b>	<b>56.0</b>	<b>74,754</b>	<b>44.0</b>	<b>169,633</b>	<b>100.0</b>

Source: PTO's patent-tracking system.

- Overall, small entities filed about one-third and large entities filed about two-thirds of the patent applications.
- U.S. applicants accounted for 56 percent and foreign applicants accounted for 44 percent of the patent applications filed in fiscal year 1990. Among the large-entity filings, U.S. applicants accounted for only 51,839, or 46 percent, of the 112,643 patent applications. In comparison,

<sup>1</sup>The nine fees reflect (1) the type of patent application being filed and (2) a request for multiple independent or dependent claims.

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U.S. applicants accounted for 76 percent of the small-entity applications.

Table 1.3 shows the patent applications filed by small entities in fiscal year 1990. In particular, independent inventors filed 72 percent, universities and other nonprofit organizations filed 3 percent, and businesses with fewer than 500 employees filed 25 percent of the fiscal year 1990 applications.

**Table 1.3: Patent Applications Filed in Fiscal Year 1990 by Category of Small Entity**

Category	U.S. origin	Percent	Foreign origin	Percent	Total	Percent
Independent inventors	31,852	55.9	9,134	16.0	<b>40,986</b>	71.9
Nonprofit organizations	1,534	2.7	365	.6	<b>1,899</b>	3.3
Small businesses	9,654	16.9	4,451	7.8	<b>14,105</b>	24.7
<b>Total</b>	<b>43,040</b>	<b>75.5</b>	<b>13,950</b>	<b>24.5</b>	<b>56,990</b>	<b>100.0</b>

Source: PTO's patent-tracking system.

PTO estimates that about 10,000 fewer applications will be filed in fiscal year 1991 than the 179,000 it projected before the 69-percent fee increase became effective in November 1990. This total still represents an increase over the 163,571 applications filed in fiscal year 1990.<sup>2</sup> PTO officials cited the 69-percent increase in fees, the recession, reduced corporate funding for research and development, the Iraq war, and fewer European filings for the lower numbers of filings than anticipated in fiscal year 1991.

## Small Entities' Patent Fees Under PTO's Proposal

As shown in table 1.4, the minimum fees that a small entity would pay to seek and maintain patent protection for its 17-year life would increase from \$1,975 (before the Omnibus Budget Reconciliation Act was enacted on November 5, 1990) to \$6,365 effective October 1, 1991, under PTO's proposal. Independent inventors would be hardest hit by the reduction of the patent fee subsidy because they account for 72 percent of the small-entity applicants and are less likely to have the resources to pay PTO's higher fees.

<sup>2</sup>This total does not include design patent applications.

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**Table 1.4: Actual and Proposed Patent Fees for Small Entities**

Fee	Fee charges			Percent increase of PTO's proposal
	Prior to Nov. 5, 1990	Nov. 5, 1990 <sup>a</sup>	Effective Oct. 1, 1991 <sup>b</sup>	
Filing fee	\$185	\$315	\$315	0
Issuance fee	310	525	1,050	100
First maintenance fee (paid 3-1/2 years after patent issued)	245	415	830	100
Second maintenance fee (paid 7-1/2 years after patent issued)	495	835	1,670	100
Third maintenance fee (paid 11-1/2 years after patent issued)	740	1,250	2,500	100
<b>Total</b>	<b>\$1,975</b>	<b>\$3,340</b>	<b>\$6,365</b>	<b>91</b>

<sup>a</sup>The Omnibus Budget Reconciliation Act imposed a 69-percent surcharge on patent filing, issuance, and maintenance fees.

<sup>b</sup>PTO's proposal would not change the 50-percent subsidy for a small entity's filing fee, but would eliminate the subsidy for the issuance and maintenance fees.

Source: PTO.

- PTO's proposal to eliminate the 50-percent subsidy for 16 of its 25 patent fees would increase the total cost of patent filing, issuance, and maintenance fees for small entities by about 91 percent. This increase would be in addition to the 69-percent fee increase that took effect in November 1990. The following should be noted, however:

1. A patent attorney's fees for filing and prosecuting a patent application—not PTO's fees—typically are the primary expense incurred in obtaining patent protection.

2. Patent fees typically would be paid over a 13-year period. PTO's proposal would retain the 50-percent subsidy for the initial fees paid by a small entity while increasing the fees that would be paid in later years. A small entity could decide not to pay these higher subsequent fees if it found, for example, that the claims PTO would grant were too narrow or the invention had insufficient commercial potential to support further development.

3. The Patent and Trademark Laws, Amendments of 1980 (P.L. 96-517), instituted maintenance fees for applications filed after December 12, 1980. PTO began to collect the second maintenance fee in 1989. However, PTO will not begin to collect the third maintenance fee, which will be the largest fee charged, until around April 1993.

- Intellectual Property Owners, Inc., and the American Intellectual Property Law Association, which represent patent owners and attorneys, believe that large entities should not subsidize the fee of small entities now that PTO obtains its revenues almost exclusively from user fees. However, both organizations questioned the appropriateness of PTO's proposal to reduce the 50-percent subsidy for small entities since all fees were increased 69 percent in November 1990. Both organizations proposed ways that PTO could reduce its expenditures in congressional oversight hearings.

Officials from Intellectual Property Owners, Inc., and the American Intellectual Property Law Association noted that reducing the small-entity subsidy would have an adverse effect particularly on independent inventors, followed by universities and other nonprofit organizations and businesses with fewer than 100 employees because these groups are less likely to have the resources to pay PTO's higher fees. Alternative approaches might include the following:

1. Redefining "small entity" to exclude businesses with, for example, 100 or more employees. These companies generally have higher revenues from which to pay PTO fees. In addition, businesses can deduct PTO's fees as an expense on their taxes. PTO could not provide a breakdown of the 14,105 patent applications filed by small businesses in 1990 of those filed by companies with fewer than 100 employees and those filed by companies with 100 or more employees.
  2. Reducing the small-entity subsidy from 50 percent to a 40- or 25-percent level instead of PTO's proposed smaller subsidy to ease the burden on small entities.
- PTO assumes that patent holders will pay the second maintenance fee for about 64,000 patents of the 117,291 patents issued in 1984. However, in response to the 69-percent fee increase, most of the federal patent attorneys or technology transfer officials we interviewed anticipate tightening the criteria for paying the second maintenance fee to minimize PTO fee costs.
  - If fewer applications are filed or fewer maintenance fees are paid than it anticipates, PTO might have to reduce its activities.

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**Patent Fees**  
**Associated With**  
**Alternative Subsidy**  
**Approaches**

Table 1.5 shows the patent fee structure associated with five alternative subsidy approaches. Fees that would be paid by large and small entities have been adjusted so that PTO would obtain the \$778 million in patent fee revenues it projects that it will need to support its activities in fiscal years 1992 and 1993. PTO projects that without this adjustment, it would experience a shortfall in revenues of (1) \$75 million under its current fee structure, (2) \$1 million under its proposal, (3) \$15 million under a 25-percent small-entity subsidy, (4) \$43 million if the 50-percent small-entity subsidy were limited only to independent inventors and nonprofit organizations, and (5) about \$80 million if the 50-percent subsidy were extended to include government agencies as well as small entities.

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**Table 1.5: Patent Fees Associated With Subsidy Alternatives**

<b>Fee</b>	<b>Retain current 50-percent subsidy</b>	
	<b>Large entities</b>	<b>Small entities</b>
Filing	\$700	\$350
Issuance	1,160	580
First maintenance	920	460
<b>Subtotal</b>	<b>2,780</b>	<b>1,390</b>
Second maintenance	1,860	930
Third maintenance <sup>c</sup>	2,780	1,390
<b>Total</b>	<b>\$7,420</b>	<b>\$3,710</b>



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PTO's proposal		25-percent subsidy		50-percent subsidy for independent inventors and nonprofit organizations <sup>a</sup>		50-percent for small entities & government agencies <sup>b</sup>	
Large entities	Small entities	Large entities	Small entities	Large entities	Small entities	Large entities	Small entities
\$630	\$315	\$640	\$480	\$670	\$335	\$700	\$350
1,050	1,050	1,070	800	1,110	555	1,160	580
830	830	850	630	870	435	920	460
2,510	2,195	2,560	1,910	2,650	1,325	2,780	1,390
1,670	1,670	1,710	1,280	1,770	885	1,860	930
2,500	2,500	2,560	1,920	2,650	1,325	2,780	1,390
<b>\$6,680</b>	<b>\$6,365</b>	<b>\$6,830</b>	<b>\$5,110</b>	<b>\$7,070</b>	<b>\$3,535</b>	<b>\$7,420</b>	<b>\$3,710</b>

<sup>a</sup>This alternative excludes all small businesses.

<sup>b</sup>Includes federal and state government agencies.

<sup>c</sup>Patent holders will begin to pay the third maintenance fee around April 1993.

Source: PTO.

- Under PTO's proposal, the filing, issuance, and first maintenance fees for small entities would be \$2,195 as compared with \$1,390 if the current 50-percent subsidy were retained. The fees for small entities would be (1) 12.5 percent less than large entities' fees for the application, issuance, and first maintenance fees (\$2,195 versus \$2,510) and (2) only 4.7 percent less than large entities' fees for the basic filing, issuance, and three maintenance fees (\$6,365 versus \$6,680).
- If the small-entity subsidy were reduced from 50 percent to 25 percent, small entities would pay \$1,910 for the filing, issuance, and first maintenance fees. The base cost for protecting an invention through a patent's 17-year term would be \$5,110.
- If the 50-percent subsidy were limited to independent inventors and nonprofit organizations, the fees paid by both large and small entities would be lower than if the current 50-percent subsidy were retained. However, small businesses would be included in the large-entity definition and would consequently pay substantially higher fees.
- If the 50-percent subsidy were extended to include federal and state government agencies along with small entities, PTO's revenues would not change sufficiently enough to warrant changing the fee structure needed if the 50-percent subsidy were retained.
- Legislation modifying the patent fee structure and/or the 50-percent small entity would be needed to implement each of the five alternatives.

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**Sources of Projected  
Fee Revenue Under  
Alternative Subsidy  
Approaches**

Table 1.6 shows the total patent fees that small and large entities would pay under each of five subsidy alternatives to meet PTO's 2-year revenue needs of \$778 million.

**Table 1.6: Sources of Projected Fee Revenues Under Alternative Subsidies in Fiscal Years 1992 and 1993**

Dollars in millions

Applicant category	Projected fee revenues				
	Retain 50-percent subsidy	PTO's proposal	25-percent subsidy	50-percent subsidy for independent inventors & nonprofits <sup>a</sup>	50-percent subsidy for small entities and government agencies <sup>b</sup>
Small entities	\$134	\$195	\$184	\$93	\$138
Large entities					
Direct	512	536	534	593 <sup>c</sup>	501
Small-entity subsidy	134	46	61	93	138
<b>Subtotal</b>	<b>646</b>	<b>582</b>	<b>595</b>	<b>686</b>	<b>639</b>
<b>Total<sup>d</sup></b>	<b>\$780</b>	<b>\$777</b>	<b>\$779</b>	<b>\$779</b>	<b>\$777</b>

<sup>a</sup>Excludes all small businesses. PTO could not provide a breakdown of small business applicants by the number of employees because it does not collect these data.

<sup>b</sup>Includes federal and state government agencies. Twelve federal departments and independent agencies that funded about 97 percent of the research and development at government laboratories in fiscal year 1990 filed 1,495 patent applications in fiscal year 1990, or about 1 percent of all applications.

<sup>c</sup>Includes an additional \$69 million paid by small businesses, which are excluded from the small-entity definition under this scenario.

<sup>d</sup>Numbers do not add up to \$778 million because PTO rounded off numbers for its fees.

Source: PTO.

- PTO's proposal would reduce large entities' support of small entities' fees in fiscal years 1992 and 1993 from \$134 million if the current 50-percent subsidy were retained to \$46 million. Overall, small entities, which filed about 34 percent of the patent applications in fiscal year 1990, would contribute about 25 percent of PTO's revenues.
- A 25-percent subsidy would reduce large entities' support of the small entities' fees in fiscal years 1992 and 1993 from \$134 million to \$61 million. Under this alternative, small entities, which filed about 34 percent of the patent applications in fiscal year 1990, would contribute about 24 percent of PTO's revenues.
- A 50-percent subsidy limited only to independent inventors and non-profit organizations would reduce the subsidy in fiscal years 1992 and

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1993 from \$134 million to \$93 million. Under this alternative, independent inventors and nonprofit organizations, which filed about 25 percent of the patent applications in fiscal year 1990, would contribute about 12 percent of PTO's revenues.

- A 50-percent subsidy extended to include federal and state government agencies along with small entities would increase the subsidy in fiscal years 1992 and 1993 from \$134 million to \$138 million. Under this alternative, small entities and government agencies, which filed about 34 percent of the patent applications in fiscal year 1990, would contribute about 18 percent of PTO's revenues.

Under this alternative, PTO would have to obtain revenues of (1) \$134 million to subsidized small entities and (2) an added \$4 million, primarily from businesses with at least 500 employees, to subsidize federal and state government agencies.

# The Impact of PTO's Higher Fees on Federal Agencies' Technology Transfer Activities

Overall, PTO's 69-percent fee increase in November 1990 has had a slight to moderate impact on the patent activities of the 10 federal agencies with the most active patent and licensing programs, according to senior agency patent attorneys or technology transfer officials we interviewed. The 10 agencies have shifted additional funds to their PTO accounts to pay the higher fiscal year 1991 fees and most have not revised their criteria or procedures for deciding whether to file a patent application for an invention in response to the higher PTO fees. Eight of the agencies are trying to reduce expenses, particularly by (1) tightening procedures and criteria for determining whether to pay the second maintenance fee for, and thereby continue in force, a patent that has not been licensed and (2) holding down extension and other fees that might be incurred in responding to official actions during PTO's examination of a patent application.

- The Navy is experiencing the greatest adverse impact because the higher fees have occurred while its budget is being reduced. The Navy budgeted \$500,000 for its PTO account for fiscal year 1991 but has needed an additional \$400,000 from research funds to pay PTO's higher fees.
- Officials for 9 of the 10 federal agencies said that their agencies routinely have paid PTO's first maintenance fee. The Air Force, for example, currently pays the first maintenance fee for virtually all of its patents. In contrast, Interior has required evidence that a firm is interested in licensing a patent before it will pay the first maintenance fee. In response to the 69-percent surcharge, the Department of Agriculture and the Tennessee Valley Authority during the past year have begun to assess licensing prospects more carefully before paying the first maintenance fee.
- Since the surcharge was enacted, officials for 7 of the 10 agencies said their agencies have tightened their criteria for paying PTO's second maintenance fee, which is due 7-1/2 years after a patent is issued, by generally requiring (1) that the patent be licensed, (2) that a license be in negotiations, or (3) concrete evidence that a company is interested in licensing the patent. In addition, Navy officials told us that Navy had already required such evidence as a basis for paying the second maintenance fee.
- Patent attorneys or technology transfer officials at 3 of the 10 federal agencies told us that the higher PTO fees may constrain their agencies' efforts to transfer technology that they have developed to U.S. businesses because of the following:

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**Section 2**  
**The Impact of PTO's Higher Fees on Federal**  
**Agencies' Technology Transfer Activities**

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1. Invention disclosures by their agencies' researchers have been increasing while the higher PTO fees are likely to limit the number of patent applications that the agencies will file.
  2. Tighter criteria for paying the second maintenance fee would limit the time available for licensing patents that are not maintained. These officials believe that instances are likely to occur in which commercial applications for a federal invention become viable after an agency has allowed the patent to lapse.
- Patent attorneys or technology transfer officials from 7 of the 10 federal agencies surveyed cited the following reasons for allowing agencies to pay a subsidized fee:
    1. Federal agencies are comparable with universities, which are treated as small entities. During the past 11 years, legislation has been enacted to encourage both universities and federal agencies to license inventions resulting from their research programs.
    2. Particularly in the past 4 years, federal agencies have given priority to establishing technology transfer programs and encouraging their scientists to file invention disclosures. The higher fees discourage these technology transfer efforts because agencies' limited budgets for paying PTO's fees will restrict their patent and licensing activities.
    3. Army and Air Force patent attorneys mentioned that in some cases, they have paid patent costs for inventions developed at their laboratories to ensure their ability to use the invention for defense purposes while assigning title to the employee inventors to enable the inventors to pursue commercial applications. The Army and Air Force will be less willing to pursue this approach in the future as a result of the higher PTO fees.
    4. Army, Navy, and Air Force patent attorneys suggested that federal agencies pay no maintenance fees unless a patent is licensed. This approach would enable agencies to extend the funds in their PTO accounts and therefore enable them to seek to license more inventions for a longer period of time.
  - Commerce and Interior patent attorneys have not found any evidence to indicate that federal patent licensing or technology transfer would suffer unduly as a result of the higher PTO fees. They suggested that by

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**Section 2**  
**The Impact of PTO's Higher Fees on Federal**  
**Agencies' Technology Transfer Activities**

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being more selective, federal agencies could improve the quality of their patent portfolios.

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