

U.S. DEPARTMENT OF COMMERCE
Office of Inspector General



*NATIONAL INSTITUTE
OF STANDARDS
AND TECHNOLOGY*

*NIST's Patent License Agreement
Process Needs Improvement*

Audit Report No. STD-16009-4-0001/December 2003

**PUBLIC
RELEASE**

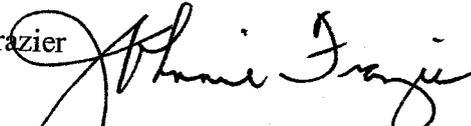
Office of Audits, Science & Technology Audits Division



UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

DEC 18 2003

MEMORANDUM FOR: Hratch Semerjian
Acting Deputy Director
National Institute of Standards and Technology

FROM: Johnnie E. Frazier 

SUBJECT: NIST's Patent License Agreement Process
Needs Improvement
Audit Report No. STD-16009-4-0001

This is the final report on our audit of NIST's patent license agreement process. We received a request on March 5, 2003, from officials at the National Institute of Standards and Technology to audit a patent license agreement between NIST and a private-sector company. In response, the Office of Inspector General initiated a review of NIST's patent license agreement process, as a precursor to auditing a specific agreement, to gain an understanding of how NIST manages these agreements and to assess the internal controls related to the process. We then examined the NIST agreement file and associated accounting records and issued a memorandum to NIST officials specific to the patent license agreement that initiated our review.

Our review of the patent license agreement process determined that NIST does not have a formal, documented process for managing its patent license agreements, and the patent license agreement language hinders monitoring activities and limits payment verification. We, therefore, recommend that NIST (1) clarify accountability over its licensing program by developing formal policies and procedures, (2) review and update the patent license agreement template, and (3) make modifications, where appropriate, when existing license agreements are renewed.

We appreciate the level of attention and careful consideration that you and your staff took to address our findings and recommendations. We have noted that NIST has agreed with the findings and recommendations and is taking action to address the problems. A copy of NIST's entire response is included as an attachment to this report.

INTRODUCTION

On March 5, 2003, the Office of the Inspector General received a memorandum from the Director for Administration and Chief Financial Officer of the National Institute of



Standards and Technology (NIST) requesting that we audit a patent license agreement between NIST and a private-sector firm.

In 1988 the National Technical Information Service (NTIS) was responsible for negotiating and administering all patent license agreements for federal agencies and, at that time, negotiated an exclusive patent license on behalf of NIST to commercialize a NIST-developed laser tracking system. In 1995 NIST assumed responsibility for administering all of its patent license agreements as NTIS no longer provided these services to federal agencies.

Licensing Encourages Use of NIST Technology

In the most recent year, NIST processed 10 patents and currently has about 15 patent license agreements in effect. License agreements are the legal instruments by which NIST's patented (or patentable) technology is made available to industry to encourage industry's use of NIST technology. To license a NIST invention, the license agreement must be compatible with NIST's mission, present no conflict of interest for NIST or its research project staff, and be approved by the appropriate authorities.¹ Within NIST, the Office of Technology Services, Office of Technology Partnerships (OTP), formerly the Technology Partnership Division, is charged with managing the licensing program.

The terms of the exclusive or non-exclusive license agreement provide industry with an incentive to commercialize the technology while preserving the value of the patented technology to NIST and the inventor(s) through royalty payments. These payments are made to both the inventor and to NIST. The inventor receives 30 percent of any license royalties, up to \$150,000 annually, with the royalty payment shared equally in the case of more than one inventor. Additionally, each licensee is required to pay a yearly maintenance fee.

The Existing Licensing Process

When the director of the operating unit where the invention is developed agrees that a patent license is appropriate, OTP prepares the required public notifications for publication in the *Federal Register*, announcing the availability of the invention and NIST's intention to grant an exclusive license for product development. OTP is responsible for negotiating appropriate license agreement terms with the licensee including, at a minimum,

1. duration of the license,
2. definitions of the licensed patent, licensed product, and net sales,
3. approval rights for sublicenses,
4. basis for royalty payments,
5. reporting requirements,
6. patent enforcement and infringement provisions,

¹ Administrative Manual, Subchapter 5.10, Licensing NIST Inventions, contains the policies and procedures to be followed when licensing NIST inventions.

7. licensee performance requirements, and
8. record retention and audit provisions.

OTP maintains permanent records of licenses, as well as the license database, and forwards information about related license financial terms to the NIST comptroller. NIST legal counsel provides review of the license and of *Federal Register* notifications prior to publication. The unit director, deputy chief counsel, and the OTP chief sign the license agreements.

OBJECTIVES, SCOPE, AND METHODOLOGY

The objective of our review was to obtain an understanding of the NIST patent licensing program by focusing on the current administrative process, and to evaluate file documentation for, and NIST's monitoring of, an individual patent license agreement. We reviewed the agreement and related documentation retained by OTP, as well as financial records relating to the agreement maintained by the Office of the Comptroller, and we reviewed financial records for other current patent license agreements. We interviewed personnel from NIST's Office of Counsel, OTP, and Office of the Comptroller, and from the Departmental Office of General Counsel, as well as personnel from the National Institutes of Health to determine best practices in administering patent license agreements. Additionally, we reviewed relevant federal laws, regulations, and guidelines.

We also evaluated the adequacy of NIST's internal controls as they related to the specific patent license agreement. We found that key steps in the patent licensing process were not documented, as described in the body of this report. We could not assess the reliability of computer-generated data because applicable financial documentation had been archived and was not available for review; however, the data was not significant to the audit findings.

Our review was conducted in accordance with generally accepted government auditing standards and performed under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended. Our review was conducted from April through July 2003, at the NIST campus located in Gaithersburg, Maryland.

FINDINGS AND RECOMMENDATIONS

Our review of the patent license process revealed that NIST is not effectively managing the licensing program because of a lack of internal controls. Although NIST's Administrative Manual provides written guidance for issuing patent license agreements, there are no written policies and procedures to explain how the agreements are to be managed and monitored once they have been negotiated and signed. The result is a general lack of understanding throughout NIST as to the tasks necessary to monitor licensing agreements.

The lack of formal, documented policies and procedures for managing the patent licensing program and the lack of designated accountability means there can be no assurance that agreements will be monitored in an effective and consistent manner, that licensees submit the proper royalty and maintenance payments, or that the patented technology will be protected. According to OMB Circular A-123, Management Accountability and Control, policies and procedures are the tools that program and financial managers need to achieve results and safeguard the integrity of their programs; they are also an integral component of an agency's internal controls.

Monitoring of Agreements Is Inadequate

NIST personnel were uncertain about important aspects of the monitoring process—who was responsible for doing it and how it should be done—because neither monitoring activities nor the roles and responsibilities for conducting these activities had been defined and documented. Thus patent license agreements have not been adequately monitored to ensure that licensees are complying with required terms and conditions.

For example, the specific agreement that we reviewed requires the company to submit, along with maintenance and royalty fees, semiannual reports to NIST detailing usage of the patented technology—net sales and details on the number of products made, used, sold, or otherwise disposed of (exact scrap). However, the licensee did not always submit reports and payments on time, and the reports it did submit did not contain the required information.

In fact, on January 15, 1996, the licensee submitted a royalty check covering three reporting periods from January 1994 to June 1995. Although a report covering the three periods accompanied the check, it did not provide the information required by the license agreement. For 1999, files indicate that neither royalty payments nor required reports were submitted. In August 2001, the licensee submitted a royalty check covering all of 2000 and half of 2001 and, again, one report covering the three reporting periods was submitted with insufficient information. Our review revealed that NIST officials did not attempt to contact the licensee in a timely manner regarding missing information or payments or any of the missing reports.

Reporting Requirements Are Not Met by Licensees or Enforced by NIST

Our review of license agreement files revealed that even when reports are submitted, they are not routinely reviewed; the information they do contain is incomplete and does not meet verification needs; and NIST personnel rarely follow up with the licensee to obtain missing information. Through discussions with NIST Office of the Comptroller and OTP personnel, we learned that reports are not routinely reviewed because responsibility for conducting such reviews has not been established, and if problems are encountered, there is no formal procedure for resolution. The result: the adequacy of required reports is not evaluated, payment amounts cannot be verified, feedback is not provided to the licensees, and accountability over the process is compromised.

In 2001, an informal procedure was initiated by the Office of the Comptroller tasking that office with billing all licensees for the yearly maintenance fees and semiannual royalty payments. Prior to this, NIST simply depended on licensees to voluntarily submit the required payments. In 2001, the licensees were instructed to submit both their royalty payments and reports to the Office of the Comptroller, which was charged with recording the payments into the accounting system, paying the inventor, and transmitting the reports to OTP. Although this action was a step toward establishing accountability, the reports are still not routinely reviewed and payment amounts are not reviewed to determine if they are correct.

License Agreement Language Should Be Improved

We found that the terms and conditions in the license agreement are not explicit, hinder monitoring activities, and limit payment verification. As a result, accountability for funds due the government and the inventor, and for use of the patented technology, cannot be ensured. For example, as noted earlier, the patent license agreement requires the licensee to file semiannual reports on the number of licensed products made, used, sold, or otherwise disposed of; the net sales; and total maintenance and royalty fees due. The report is to be accompanied by payment of fees, but it is not required to be certified as correct by an authorized officer, a key step in establishing accountability.

Additionally, terms and conditions of the patent license agreement that initiated our review require that any accountant selected by NIST to inspect the records must be approved by the licensee and that the licensee only needs to retain records supporting the reports and payments for 2 years following the reporting period. These restrictive terms limit NIST's ability to monitor the licensee's performance and to verify the accuracy of payments beyond a 2-year period. Although the National Technical Information Service negotiated the original agreement for this particular license in 1988, the agreement was modified and signed by NIST officials in 1997, extending the period of exclusivity. NIST had an opportunity at that time to make changes to the terms and conditions.

NIST previously took action to improve the standard patent license agreement and developed a template for the terms and conditions; however, in light of the issues defined in this report, the standard terms and conditions should be reviewed to better protect the interests of both the inventor and NIST. Furthermore, consideration should be given to designing a standard, pro-forma reporting format to be used by all licensees for the semiannual reports and to requiring that reports be certified as correct by an authorized officer of the licensee. Additionally, when changes are made to existing agreements, NIST should review the entire agreement to ensure all interests are protected, and negotiate corrections to the terms and conditions as necessary.

Formalized policies and procedures are essential for establishing the control mechanisms that will enable NIST to adequately manage its patent licensing program. These policies and procedures should outline the purpose and objectives of the program, assign roles and responsibilities, and define key milestones. In addition, NIST should make use of best practices developed by other organizations that enter into patent license agreements with

private industry, such as the National Institutes of Health. Although the NIH program is much larger than NIST's, several aspects of its patent license agreements program could be beneficial to NIST, such as, using pro forma reports and self-audit techniques, and requiring company certification of information submitted to the agency. Pro forma reports could outline all data fields required by the agreement so that reports submitted by the licensee are consistent and provide the agency with the information necessary for monitoring activities. Self-audit techniques require the licensee to internally perform designated audit steps and report the results to the agency. These reports, when certified as correct by an authorized officer of the licensee, establish accountability for the activities of the licensee. NIST should consider these elements when designing their program policies and procedures.

RECOMMENDATIONS

We recommend that the NIST Acting Deputy Director instruct the Director, Technology Services to:

1. Develop formal policies and procedures that outline the purpose, objectives, roles, responsibilities, and key milestones for the patent license agreement process. The policies and procedures should include both administrative and financial-related activities and be fully documented in the NIST Administrative Manual.
2. Review and update, as necessary, the template for the terms and conditions of the standard patent license agreement to ensure that it fully protects the interests of the inventor and NIST and agrees with the newly developed policies and procedures; and ensure that the terms of any audit clause included in the template are coordinated with the Office of Inspector General.
3. When making modifications to existing patent license agreements, review the entire agreement to ensure all interests are protected and negotiate corrections to the terms and conditions as necessary.

NIST's Response to Recommendations

NIST officials agree with the recommendations and (1) acknowledge the need to formalize the procedures that outline the purpose, objectives, roles, responsibilities and key milestones for the patent license process; and (2) are currently reviewing and updating the existing patent license agreements, and developing a standard template for future and renewal licenses to include coordinating with the Office of Inspector General regarding the terms of any audit clause. NIST officials also stated that when making modifications to the existing patent license agreements, they would review each agreement in its entirety to ensure consistency with newly developed NIST policies and standard template.

NIST also provided comments regarding the number of patents processed in the most recent year and stated that the name of the Technology Partnerships Division was changed to the Office of Technology Partnerships on October 5, 2003.

OIG Comments

We are pleased by NIST's prompt actions regarding this report's recommendations. We have also noted NIST's comments regarding the number of patents processed in the most recent year and that the name of the Technology Partnerships Division had been changed to the Office of Technology Partnerships. We have modified the report accordingly to incorporate those comments.

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We appreciate the cooperation and courtesies provided by your staff throughout the course of our audit. In accordance with DAO 213-5, please provide us with the audit action plan for our review and concurrence addressing all of the report recommendations within 60 days of this memorandum. Should you need to discuss the contents of this report or the audit action plan, please call me at (202) 482-4661, or Michael Sears, Assistant Inspector General for Auditing on (202) 482-1934.

Attachment

cc: Stephen Willett, NIST Audit Liaison
Dr. Richard Kayser, Technology Services



OCT 21 2003

NIST

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
 Gaithersburg, Maryland 20899
 OFFICE OF THE DIRECTOR

MEMORANDUM FOR Michael Sears
 Assistant Inspector General for Auditing

From: Arden L. Bement, Jr. *Arden Bement, Jr.*
 Director

Subject: NIST's Patent License Agreement Process Needs Improvement
 Draft Audit Report No. STD-16009-3-XXXX

Thank you for the opportunity to review the subject draft audit report examining the patent license agreement process at NIST. Following are the draft report's three recommendations and our responses to them, as well as comments on some other statements made in the report.

A. Recommendations and NIST Responses

We recommend that the NIST Director instruct the Director, Technology Services to:

1. Develop formal policies and procedures that outline the purpose, objectives, roles, responsibilities, and key milestones for the patent license agreement process. The policies and procedures should include both administrative and financial-related activities and be fully documented in the NIST Administrative Manual.

NIST Response

NIST accepts this recommendation. NIST has had informal procedures in place since 2001, following discussions initiated by the Director of Technology Services with the NIST Comptroller's Office, but recognizes the need to formalize the procedures that outline the purpose, objectives, roles, responsibilities, and key milestones that must be determined for developing license agreements and monitoring post-license performance. The policies and procedures will define the roles and responsibilities of the different offices that have responsibilities for the NIST post licensing surveillance process. The administrative manual will be revised to include procedures for both administrative and financial-related activities.

2. Review and update, as necessary, the template for the terms and conditions of the standard patent license agreement to ensure that it fully protects the interests of the inventor and NIST and agrees with the newly developed policies and procedures; and ensure that the terms of any audit clause included in the template are coordinated with the Office of Inspector General.

NIST Response

NIST accepts this recommendation. Staff members in the NIST Office of Technology Partnerships and the Office of the NIST Counsel are currently reviewing existing patent license agreements with a view to updating them and providing a standard template for future and renewal licenses. The template will include standard language for an audit clause that will be coordinated with the Office of Inspector General.

3. When making modifications to existing patent license agreements, review the entire agreement to ensure that all interests are protected and negotiate corrections to the terms and conditions as necessary.

NIST Response

NIST accepts this recommendation. As we modify existing patent license agreements, we will review the entire agreement to ensure consistency with the newly developed NIST policies and the template for the terms and conditions of the standard patent license agreement to ensure that the interests of both the inventor and NIST are fully protected. As necessary, we will modify the patent license agreement to be consistent with the revised policies and templates.

B. Other Comments

In reviewing the draft audit report, NIST noted that the report states that NIST processes about 30 patents per year. In the most recent year, NIST processed only 10 patents, however. In addition, NIST has stressed the importance of improvements to the post-licensing surveillance process in its response, since the draft audit report focuses on that portion of the licensing process. Finally, the name of the Technology Partnerships Division was changed to the Office of Technology Partnerships on October 5, 2003.