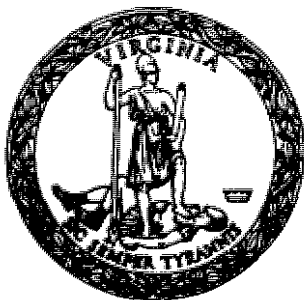


**SPECIAL REPORT OF THE
JOINT LEGISLATIVE
AUDIT AND REVIEW COMMISSION ON**

The Virginia Tech Library System

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



House Document No. 6

**COMMONWEALTH OF VIRGINIA
RICHMOND
1985**

MEMBERS OF THE JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

Chairman

Delegate L. Cleaves Manning

Vice Chairman

Senator Edward E. Willey

Senator Hunter B. Andrews

Delegate Richard M. Bagley

Delegate Robert B. Ball, Sr.

Senator Peter K. Babalas

Senator John C. Buchanan

Delegate Vincent F. Callahan, Jr.

Delegate Theodore V. Morrison, Jr.

Delegate Lacey E. Putney

Delegate Ford C. Quillen

Mr. Charles K. Tribble, Auditor of Public Accounts

Director

Ray D. Pethtel



COMMONWEALTH of VIRGINIA

Joint Legislative Audit and Review Commission
Suite 1100, 910 Capitol Street
Richmond, Virginia 23219
(804) 786-1258

November 12, 1984

L. CLEAVES MANNING
Chairman

EDWARD E. WILLEY
Vice Chairman

HUNTER B. ANDREWS
Senator

PETER K. BABALAS
Senator

RICHARD M. BAGLEY
Delegate

ROBERT B. BALL, SR.
Delegate

JOHN C. BUCHANAN
Senator

VINCENT F. CALLAHAN, JR.
Delegate

L. CLEAVES MANNING
Delegate

THEODORE V. MORRISON, JR.
Delegate

LACEY E. PUTNEY
Delegate

FORD C. QUILLEN
Delegate

EDWARD E. WILLEY
Senator

CHARLES K. TRIBLE
Auditor of Public Accounts
Ex Officio

RAY D. PETHTEL
Director

Delegate L. Cleaves Manning
Chairman
Joint Legislative Audit and Review Commission
910 Capitol Street
Richmond, Virginia 23219

Dear Delegate Manning:

I am pleased to transmit to you a copy of the special study "Virginia Tech Library System". This study examines the ownership of the proprietary rights in the computer software, the sharing of royalties with a University employee, and the transfer of the system to the Virginia Tech Foundation for marketing and distribution.

As you know, this inquiry just begins to address some of the broader questions of the Commission regarding the administration and management of patents and copyrights in State government. A report on the patent and copyright policies of publicly supported colleges and universities and State agencies is scheduled for presentation at a future meeting of the Commission.

We wish to express our appreciation for the cooperation and assistance extended by the staff of Virginia Tech.

Sincerely,

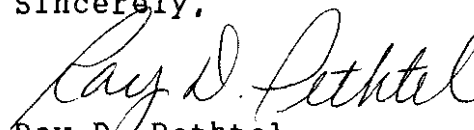

Ray D. Pethtel
Director

TABLE OF CONTENTS

	<u>Page</u>
THE VIRGINIA TECH LIBRARY SYSTEM	1
Who Is Responsible For Developing And Financing VTLS?	2
Who Owns VTLS And How Should The Royalties Be Shared?	6
Was The Transfer Of VTLS To The Virginia Tech Foundation Appropriate?	12
Are Public Libraries Being Charged A Fair Price For VTLS?	13
Conclusions And Recommendations	15
APPENDIXES	17

THE VIRGINIA TECH LIBRARY SYSTEM

At the request of Speaker Philpott, the Commission authorized a study of the development of an automated library system for the Virginia Tech Newman Library and the assignment of this system to the Virginia Tech Foundation for marketing and distribution. The Speaker was concerned that the appropriate steps might not have been taken to secure the proprietary interest of the State and the taxpayers in the computer program. He was also concerned that the Virginia Tech Foundation may have been charging libraries in the Commonwealth an unfair price for the computer software.

Consistent with this study request, we examined the following questions: (1) Who owns the proprietary rights in the Virginia Tech Library System (VTLS)? (2) Who is entitled to royalties and to what extent should they be shared? (3) Does the University have the authority to transfer proprietary rights to the Virginia Tech Foundation? and (4) Is the Virginia Tech Foundation charging public libraries a fair price for installing VTLS?

The staff reviewed relevant federal and State laws, policies, and procedures; consulted with intellectual property specialists at The College of William and Mary and The University of Virginia; and requested the Auditor of Public Accounts to review certain financial accounting and auditing issues related to the development of VTLS. The findings of the Auditor are included in the appendix to this report.

The major conclusions of the JLARC special study are:

1. Development and sales of VTLS have resulted in substantial revenues that can be used by the Virginia Tech Foundation for the benefit of the University. The VTLS has received national and international attention. This can be attributed to the initiative and ingenuity of Dr. Vinod Chachra and to the entrepreneurial policies and attitudes of the University which foster the creation of intellectual properties by its staff.
2. Virginia Tech chose to include the development of VTLS under its patent policy. However, JLARC staff conclude that the application of the patent policy was a mistake because the computer software was not patentable and federal copyright law covers computer software. Thus, the University should have used its copyright policy in determining Dr. Chachra's share of the royalties.
3. Under the University's 1973 copyright policy, Virginia Tech owned an intellectual property developed as an assigned duty by a staff member

and was not obligated to distribute royalties. The development of VTLS was an assigned duty only until 1978 and enhancements thereafter resulted from Dr. Chachra's independent scholarly research. Therefore, the President of Virginia Tech should determine the extent to which VTLS replicates the original computer software developed for the Newman Library in 1978, the year Dr. Chachra left his position as Director of the Systems Development Division.

That portion of the existing VTLS which has been replicated should be assigned a market value. The market value should be presumed to be at least \$2500 (equal to one-half of the initial selling price of VTLS in 1980) unless the President can establish with reasonable certainty that the amount is different. Revenues that have accrued or that may accrue from the replicated portion of VTLS should be credited to the Foundation and not shared with Dr. Chachra.

4. Because the original VTLS was developed with general funds and as a part of the assigned duties of Dr. Chachra, the Foundation should reimburse the general fund \$53,000 for the developmental expenses associated with the original software system.
5. University decisions regarding the assignment of proprietary rights to the Virginia Tech Foundation have been consistent with State laws and longstanding intellectual property policies of the University.
6. The revised VTLS pricing options for public libraries in Virginia seem fair and reasonable.

WHO IS RESPONSIBLE FOR DEVELOPING AND FINANCING VTLS?

The Virginia Tech Library System is considered a "state-of-the-art automated library technology". It is used to automate a library's public service operations such as circulation, control, and billing. VTLS provides the public direct access to online catalogs and possesses powerful subject and word search capabilities which make traditional card catalogs obsolete. Its advanced design and practical application have made the system quite popular among other libraries in the United States as well as abroad. Fifty-five libraries have acquired the system since 1980. As of June 1984, total revenues have been \$719,000.

Virginia Tech has recognized Dr. Vinod Chachra as the designer and developer of VTLS. Several people were hired to assist Dr. Chachra and did so at his direction. He has been associated with the project for about 10 years now and is currently Vice-President for Computing and Information Systems for Virginia Tech. He is also an associate professor in the Department of Industrial Engineering and Operations Research and has been in a faculty position since he joined the University. Dr. Chachra's teaching assignments have always been secondary to his administrative duties at the University.

On December 15, 1983, Dr. Chachra assigned his interest in VTLS, if any, to Virginia Tech. Virginia Tech transferred its interest to the Virginia Tech Foundation, a private nonstock corporation. The assignments required the Foundation to pay Dr. Chachra 50 percent of the net royalties derived from sales of VTLS since the first sale in November 1980. As of June 1984, \$154,467 in royalty payments have been set aside for Dr. Chachra. The Center for Library Automation is charged with developing, promoting, and distributing VTLS. The Center is financed with State appropriations and special funds provided by the Virginia Tech Foundation. (State appropriations include both general funds and non-general funds such as student tuition and fees. At the time of VTLS' development, general funds accounted for about 75 percent of the systems development budget.)

A management group was established in December 1983 to oversee VTLS marketing and sales activities. The primary purpose of the group is to advise the officers of the Foundation as to the management of VTLS. It is composed of five high-level officials of the University, chaired by the Treasurer and Associate Vice-President who also serves as the Secretary-Treasurer of the Foundation. The group makes decisions concerning, for example, the appropriate price to charge for VTLS or whether VTLS should be licensed by a commercial vendor. This is the first intellectual property assigned to the Foundation requiring the formation of such a management group. It is unique to VTLS.

The remainder of this section traces the development and financing of VTLS.

Development and Financing of VTLS

In early 1975, the Newman Library was considering the acquisition of an automated system for library circulation and control. The library favored purchasing the system from a

commercial vendor at a cost of \$250,000. The University sought the advice of Dr. Chachra because he was director of systems development for the University. Dr. Chachra evaluated the proposed system and concluded that the University could develop a more advanced system in-house at an estimated cost of \$215,000. According to Virginia Tech, the cost of the computer software was \$53,000 and the cost of the hardware was \$162,000. Once the recommendation was approved by Dr. Alfred Krebs, the acting Vice-President for Academic Affairs, Dr. Chachra began developing the software.

The systems development unit was responsible for providing assistance and support to other organizations within the University, including the Newman Library. VTLS was financed entirely with State appropriations. The University purchased all of the computer hardware necessary for the automated system to operate. VTLS became operational in May 1976.

Development Costs. According to the Auditor's report, the actual costs of developing VTLS for its use in the Newman Library cannot be determined because prior to 1982, personnel costs associated with VTLS were charged to the employee's departmental operating budget rather than to individual project accounts. Therefore, the accuracy of Dr. Chachra's projected \$53,000 software development costs cannot be assessed.

In the summer of 1983, a group was appointed to examine the accounting for VTLS. This group determined that prior to November 1, 1980, VTLS costs were related to development of the system solely for implementation at the University and that, accordingly, all such costs were an appropriate charge to the general fund of the Commonwealth. Consequently, Virginia Tech has not been reimbursed for monies spent on the development of VTLS for use in the Newman Library. The Auditor of Public Accounts disagrees with this notion. In his report he states:

"The University's position is that the VTLS was needed by the library and that the development costs should be borne by the Commonwealth without regard to the commercial aspect of the system. This position is not proper, as it ignores the fact that what is being sold was paid for by the State, should have been treated as any other asset of the State, and even if it is determined that Dr. Chachra or any other University staff member is entitled to any share of the "profits", no "profits" exist until the cost has been recovered by the State."

Since the nature of the accounting records apparently prevent anyone from determining the actual cost of developing VTLS, it is recommended that the State be reimbursed to the

extent of the \$53,000 projected costs of software development that, in 1974, Dr. Chachra anticipated would be necessary to produce a system comparable to that proposed for purchase by the University.

Promotional Costs. Promotional costs, as opposed to the costs of developing VTLS for use at the Newman Library, have been treated differently by the University. Effective November 1, 1980, a single account was used solely to record sales and marketing costs of VTLS and the costs associated with further developing VTLS for use in libraries other than Newman Library. For the period November 1, 1980, through June 30, 1983, \$142,543.38 of equipment and travel costs associated with promoting the sale of VTLS were charged to this account. In addition, salaries associated with promoting VTLS were estimated at \$31,210 based on the travel time of the University personnel. Total promotional costs between November 1, 1980 and June 30, 1983 amounted to \$173,753.38, based on the Auditor's report.

The University concluded that expenses associated with such activities beyond the development and use of the system solely at Virginia Tech were not an appropriate charge against State appropriations. When the University transferred ownership of VTLS to the Foundation on December 13, 1983, VTLS revenues amounted to \$251,954.93. Rather than transferring this amount to the Foundation, Virginia Tech reduced the figure by the \$173,753.38 promotional costs, thereby reimbursing the general fund. The Foundation received net revenue of \$78,201.55.

The Auditor of Public Accounts stated that the methodology used by the University task force to estimate VTLS revenues and expenditures attributable to promotional activities was reasonable based on the information and records available to the task force. He concluded that the task force's expenditure total of \$173,753.38 was probably a minimum figure.

Following the transfer, the Virginia Tech Foundation has paid for all expenses associated with the development, marketing, and installation of the system beyond expenses directly attributed to the ongoing development of the system for the Newman Library.

Center for Library Automation

The Center for Library Automation, housed in the Newman Library, is now responsible for enhancing, packaging, distributing, and installing VTLS. When the University was unable to negotiate an acceptable agreement with a private

vendor to market VTLS, the Center for Library Automation was established. Dr. Vinod Chachra is the Center's director. The Center is financed with funds from the Virginia Tech Foundation and the University's operating budget. The Center has ten full-time and three part-time employees.

The objectives of the Center for Library Automation are:

1. To conduct research and development activities that improve the state-of-the-art for computer applications in libraries, in information centers, and, more generally, in the fields of information transfer.
2. To develop, enhance, package, distribute and support the products (including VTLS) of the research and development efforts of the Center, which currently emphasize automation in libraries.
3. To document, distribute, and, when appropriate, publish news of the efforts, progress, and findings of the research and development activities of the Center.

The Center for Library Automation will continue to treat Newman Library as the primary user of VTLS. Initial software testing will be done on the Center's computer. Once problems in any new system enhancement are corrected, the enhancement will be made available to Newman Library as a second testing site. After successful testing at Newman Library, the new enhancement will be distributed to outside users.

WHO OWNS VTLS AND HOW SHOULD THE ROYALTIES BE SHARED?

A key concern of this inquiry is the extent to which the State has a financial interest in VTLS. That is, should the Commonwealth of Virginia be entitled to a greater share of the income?

The University's Copyright Policy and its specific application to VTLS are discussed below. An examination of this Policy indicates that the Commonwealth does have a greater financial stake in VTLS than has been acknowledged.

University Copyright and Patent Policies

Intellectual properties developed by employees of Virginia Tech are covered by either the copyright or patent

policy of the University. (Copies of these policies are included in the appendix.) The University opted to include the development of VTLS under its patent policy. However, JLARC staff conclude that the application of the patent policy was a mistake because the computer software was not patentable and federal copyright law covers computer software. The University should have used its copyright policy in determining Dr. Chachra's royalties.

1973 Copyright Policy. On February 28, 1973, the Board of Visitors of Virginia Tech adopted the University Copyright Policy. This policy was in effect during the design and development of VTLS and was revised in April 1984. The policy delineates when the University will claim ownership in "materials subject to copyright" and when it will be obligated to pay royalties.

The introduction to the 1973 Copyright Policy reads as follows:

The University gains a right to materials subject to copyright when the materials result from an assigned duty of a member of the staff of the University, when the University provides funds for the production of the materials, or when substantial use of University facilities and resources is made in the production of the materials, including the case when funds and facilities are provided by outside sponsors.

According to the above language, the Policy applies to "materials subject to copyright". The computer software developed for the Newman Library is a material subject to copyright. Since 1964, the U.S. Copyright Office has accepted for registration printouts of computer software. Although patent and copyright lawyers have been uncertain as to the patentability of source code computer software, most experts have long recognized that source code computer software could be protected through copyright. Source code is generally a set of instructions to a computer in a particular computer language such as COBOL and it can be copyrighted under federal copyright law. The U.S. Congress confirmed this belief in 1980 by specifically referring to computer software in the copyright law.

Since computer software is protected under copyright law, VTLS is a material subject to copyright under the University Copyright Policy. Although part or all of VTLS may or may not be currently protected under copyright law, the University Copyright Policy does not require that a material be copyrighted in order to come under the policy. The Policy is applicable in cases where the material may be copyrighted rather than only when the material actually has been copyrighted.

Both the University and Dr. Chachra can enforce the University Copyright Policy based on §122 of Title 23 of the *Code of Virginia* and on general principles of contract law. Section 122 states that the Virginia Tech Board of Visitors, "may make such regulations as they deem expedient, not contrary to law." Virginia Tech's Patent and Copyright Policies are regulations within the meaning of the statute and have the force of law so long as they are not contrary to any State or federal law. Virginia Tech's intellectual property policies are not contrary to any State or federal law. In addition, although there have been no Virginia cases addressing this point, many courts in America are holding that university regulations are part of the terms of the employment contract between a university and its faculty members.

Copyright Situations. The Copyright Policy addresses three different situations:

1. Where materials result from an assigned duty.
2. Where the University provides funds to produce the materials.
3. Where substantial use of University facilities and resources is made.

Under the heading of "Proprietary Interests of the University", the 1973 Copyright Policy delineates when the University will claim ownership of a material subject to copyright and when it will share royalties. In essence, the Copyright Policy enables the University to claim ownership in all three of the above situations but requires it to share royalties only in the latter two cases. The Copyright Policy reads as follows:

The University shall own all rights to all materials written or produced by a University employee as a normal part of his assigned duties. When the University acquires a right through authorized substantial use of University funds or facilities in the production of materials resulting from a staff member's own initiative, the University shall copyright the materials, and the University and the staff member shall share equally in any royalties.

The first sentence in the above paragraph vests title in the University when the materials subject to copyright result from an assigned duty. The 1973 Copyright Policy is silent on whether royalties shall be shared and thus the University is not

obligated to distribute royalties where the materials subject to copyright result from an assigned duty. (Under the revised 1984 policy, a staff member developing a material subject to copyright as an assigned duty will now share equally in net royalties.)

The second sentence in the above paragraph from the Copyright Policy enables the University to copyright materials resulting from a staff member's substantial use of either University funds or University facilities. The second sentence is applicable only in cases where the materials resulted from the staff member's own initiative in contrast to an assigned duty. The University, however, is obligated to share royalties with the employee.

Application of the Patent Policy. Virginia Tech did not apply the 1973 Copyright Policy to VTLS. Instead, the University chose to apply its 1975 Patent Policy. The University Counsel states:

"...even though software is not normally patented, from the standpoint of management and marketing, VTLS is more like an invention than a book. Because the existing copyright policy did not reference the development of computer software, the arrangements for the transfer of VTLS to the Foundation, the management and marketing of VTLS, and the ownership interests in VTLS, were handled pursuant to the University Patent Policy."

The reasoning of the University Counsel suggests that Virginia Tech chose to apply the patent policy to VTLS out of convenience rather than because the University believed that only the patent policy was enforceable by Dr. Chachra or the University. The Patent Policy is not the appropriate policy to apply to VTLS. As already discussed, computer software has been recognized by the U.S. Copyright Office as copyrightable since 1964 and therefore it is a "material subject to copyright" within the meaning of the 1973 Copyright Policy. Consequently, Virginia Tech should have applied the 1973 Copyright Policy rather than its Patent Policy.

The operative language of the Patent Policy states,

"...The University shall obtain ... the entire right, title, and interest in and to any invention made by any ... staff member ... (a) during working hours, or (b) with a contribution by the University of facilities, equipment, materials, funds, ..."

"....the share of the inventor(s) ... shall be 50% of net income from royalties after deduction of direct costs to the University of obtaining, defending, and managing the patent..."

"....Payments received by the University ... for an invention or innovation that is not yet patented, including those that may not be patentable, will be distributed in accordance with this policy..."

Because the language under the Patent Policy is substantially different from the language under the 1973 Copyright Policy, different results as to royalty distribution are achieved. The Patent Policy makes no distinction between intellectual properties resulting from an assigned duty and those resulting from a faculty member's own initiative. Assuming that the Patent Policy were the correct policy to apply to VTLS, Dr. Chachra would be entitled to share equally in all royalties accruing after the costs of development are recovered.

Sharing of Royalties With Dr. Chachra Under The 1973 Copyright Policy

Since VTLS was developed while the 1973 Copyright Policy was in force, the University is obligated to share royalties with Dr. Chachra only to the extent he developed computer software on his own initiative while using University funds or facilities.

Initial System. The original library system developed and installed by Dr. Chachra in September 1975, was designed to provide Newman Library with all the features of the leading library computer software available in the marketplace. Although the system lacked many of the features currently available, it was designed to and did meet the needs of Newman Library. Dr. Chachra developed the initial library system as a part of his assigned duties while he was director of the systems development department. The mission of this department was to develop and manage computer software to meet the University's needs.

After the initial system was in place, Dr. Chachra began to modify and enhance VTLS. He modified VTLS in response to specific problems arising at Newman Library, problems arising in the library industry, and because of his own scholarly interests. As system development director, Dr. Chachra was responsible for developing and maintaining VTLS. His duties included solving problems with VTLS arising at Newman Library, and when he modified VTLS in light of these problems, Dr.

Chachra was carrying out his assigned duties. However, when Dr. Chachra modified VTLS to solve problems arising in the library industry or in pursuit of his own scholarly interests, he was acting on his own initiative and not because of an assigned duty.

Dr. Chachra is entitled to share in the royalties attributable to all modifications of VTLS made independently of his assigned duty. JLARC staff are unable to determine what portions of the computer software were written as a part of Dr. Chachra's duty to the University and Newman Library as opposed to his scholarly research activities.

Revisions After 1978. A more reasonable approach to determine Dr. Chachra's royalty share is to separate the computer program for VTLS as it was written before and after 1978, the year Dr. Chachra was promoted to a new position. The software as it was written before 1978 resulted from an assigned duty of Dr. Chachra, while modifications made after 1978 were not the result of an assignment.

Dr. Chachra's position after 1978 as director of computing resources required him to administer several departments including systems development, but not to handle the day-to-day development of computer software for the University. Although his duties as director of computing resources were significantly different from his duties as systems development director, Dr. Chachra retained responsibility for VTLS. The University did not require Dr. Chachra to retain this responsibility nor did he ask the University to do so. At this point, Dr. Chachra retained the VTLS project on his own initiative. Since Dr. Chachra was responsible for writing computer software for the University until 1978, it is reasonable to conclude that all modifications of VTLS before 1978 were part of his duty to develop and maintain the system at the University.

VTLS as it exists today and when it was first sold in November 1980 is in part a replication of the system as it was written in 1978. Had the system been sold in 1978, Dr. Chachra would not have been entitled to share in the royalties. Consequently, that portion of the sales price of VTLS which is attributable to the replicated portion of VTLS as it existed in 1978 should not be shared with Dr. Chachra, since it results from a previously assigned duty. The portion of the sales price of VTLS attributable to modifications and enhancements made after 1978 should be shared equally with Dr. Chachra pursuant to the 1973 Copyright Policy. For example, if the system sold for \$5000 in 1980 and 50 percent of the computer program in 1980 is as VTLS was written in 1978, then \$2500 of the sale

price should not be shared with Dr. Chachra while \$2500 should be shared.

JLARC staff are unable to determine what percentage of the price of VTLS for all sales since the first sale in 1980 is attributable to VTLS as it was written in 1978. The University may be able to make such a determination. Therefore, JLARC staff recommend that the burden be placed on the President of Virginia Tech to establish to what degree VTLS, as it existed in 1978, has been replicated in later sales. No royalties should be paid to Dr. Chachra until the President completes his assessment.

Dr. Chachra expects to develop within the next year an entirely new library system to replace VTLS. According to Dr. Chachra, the system will not be based on the machine or data base management system used by VTLS. If this is correct, under the current 1984 Copyright Policy, Dr. Chachra will be entitled to share equally in all royalties derived from the new system because that the new system will result from Dr. Chachra's own independent research activities.

WAS THE TRANSFER OF VTLS TO THE VIRGINIA TECH FOUNDATION APPROPRIATE?

The Board of Visitors of Virginia Tech has the necessary statutory authority to assign personal property such as VTLS to the Virginia Tech Foundation.

Virginia universities are empowered to acquire and hold real and personal property or interests in their own names and the Virginia Tech Board of Visitors is charged with the care, preservation, and improvement of property belonging to the University. There are no statutes authorizing Virginia Tech specifically or universities generally to transfer personal (or intellectual) property from the university to other entities or persons.

However, the Board of Visitors of Virginia Tech is a corporation pursuant to §23-114 of the *Code of Virginia*. In its capacity as a nonstock corporation, the Board of Visitors has pursuant to §204.1 of Title 13.1 of the *Code of Virginia*, the power, "[t]o sell, convey, mortgage, pledge, lease, exchange, transfer and otherwise dispose of all or any part of its property and assets." The Board has the power under §204.1 to transfer VTLS to the Virginia Tech Foundation.

The Virginia Tech Foundation is also a nonstock corporation. The Foundation's Articles of Incorporation give to the Foundation all powers granted to nonstock corporations under the laws of the Commonwealth. Such powers would include pursuant to §204.1 of Title 13.1 of the *Code of Virginia* the power to, "purchase, take, receive, lease, take by gift, devise or bequest, or otherwise acquire, own, hold, improve, use and otherwise deal in and with, real or personal property, or any interest therein, wherever situated." Under this statute and the Articles of Incorporation, the Virginia Tech Foundation has the ability to receive the rights in VTLS and to manage that property as it sees fit for the benefit of the University.

The Commonwealth has the power to prevent Virginia Tech, or any other college or university, from transferring real property to a private foundation or other entity but it does not have such power with respect to personal property such as VTLS. Before a university can transfer real property, it must obtain the Governor's approval pursuant to §4.1 of Title 23 of the *Code of Virginia*. We are not suggesting that the transfer of VTLS was improper, but rather that the Commonwealth did not have the opportunity to attach conditions to the transfer that may have been deemed necessary to protect the public interest. Therefore, it is recommended that The General Assembly consider authorizing the Governor to review and approve transfers of certain types of intellectual property by colleges and universities.

ARE PUBLIC LIBRARIES BEING CHARGED A FAIR PRICE FOR VTLS?

Public libraries in Virginia have no legal right to obtain VTLS at below market cost. This is especially true now that VTLS belongs to a private corporation, namely the Virginia Tech Foundation. Because VTLS was developed with State appropriations, the University desires to make certain that public libraries in Virginia may obtain VTLS at the least cost possible. A fair price for sales to Virginia public libraries would not include any profit to the Foundation. Currently, public libraries have three different ways to pay for VTLS. This method of pricing seems to result in a fair price being charged to libraries in Virginia.

Previous Pricing Policies

The University and the Virginia Tech Foundation have always provided the Department of Management Analysis and Systems Development (MASD) with the current version of VTLS without charge for distribution to state and local government agencies.

In March of 1983, the Virginia State Library was the first public library in Virginia to install VTLS. The library paid a \$500 fee to copy the computer program and paid the travel costs of the Virginia Tech personnel who installed the system. Virginia Tech did not request reimbursement of salaries or other non-travel expenses of the installation team. The Virginia State Library purchased a yearly maintenance contract at full price. Longwood College, Newport News Public Library, and Pamunkey Regional Library obtained VTLS under the same conditions given to the Virginia State Library.

When James Madison University purchased VTLS in March, 1984, it was required to pay one-half of the then \$40,000 market price for the software. James Madison University also purchased a yearly maintenance contract. The College of William and Mary and Mary Washington College acquired the software under this pricing structure.

Revised Pricing Policy

In May 1984 Virginia Tech introduced its current pricing schedule. James Madison University Library and the other two libraries who paid one-half the market price for VTLS were given the opportunity to retroactively choose one of the three pricing options under the current pricing structure. None of them chose to do so, however.

The Foundation currently offers three price options to public libraries within the Commonwealth. Under the first option, the Foundation charges the library a \$500 fee for copying the magnetic tape that stores the computer program. No installation or other support services are provided to the library. The library, in essence, is given a copy of VTLS and then is left to implement VTLS on its own.

Under the second option, the Foundation charges the library one-half the current market price (\$60,000) of VTLS. Currently a public library in Virginia would pay \$30,000 for VTLS. The purchasing library receives all the installation and support services that an out-of-state library paying full cost would receive. In addition a library may purchase a maintenance contract for \$3,600/year. The maintenance contract allows the library to receive all enhancements and modifications to the software as they become available.

Option three is the most recent option and was added after JLARC began its study of VTLS. Under this option, the library may pay a copying cost of \$500 and pay for pre-installation planning, installation, and post-installation

support services based on rates established by the Foundation. As of August 29, 1984, the Foundation had not established its own service rates. Instead, the Foundation is using rates established by MASD for its programmer/analyst services. A public library may purchase a maintenance contract for \$3,600/year.

Because the Foundation provides these three options, libraries in Virginia are assured of receiving VTLS at the least cost possible. The Foundation seems to be charging a fair price for VTLS.

CONCLUSIONS AND RECOMMENDATIONS

Like most major universities, Virginia Tech has had long standing policies governing the development of intellectual properties by its staff. This review has found that decisions related to the Virginia Tech Library System (VTLS) have not been consistent with the University's 1973 Copyright Policy.

Dr. Vinod Chachra and the leadership of Virginia Tech should be given credit for developing VTLS, a state-of-the-art library technology. Through Dr. Chachra's scholarly initiative and ingenuity and the University's continued support, VTLS has become one of the two largest revenue producing intellectual properties among Virginia's public colleges and universities. This is occurring at a time when the Governor and General Assembly have established a high priority on the creation of high technology in the Commonwealth. This innovative library technology is providing Virginia Tech substantial recognition in the national and international library community. In addition, public libraries in Virginia can obtain an advanced library system at a greatly reduced price.

Unlike most intellectual properties created or developed by faculty members, the initial system designed for the Newman Library was financed solely with State appropriations. At the time of its initial development, Dr. Chachra was director of an administrative unit that was responsible for providing systems software support to the University as a whole. As a part of his assigned duties, he designed and developed the initial software system for the Newman Library using State appropriations. For these reasons we believe that the Commonwealth of Virginia should be reimbursed for the development costs associated with VTLS. The Foundation should be reimbursed for any replication of the initial software as it existed in 1978. The amount of revenues being distributed to Dr. Chachra and to the Virginia Tech Foundation does not

currently recognize this prior condition and is in excess of the amount due under application of the 1973 Copyright Policy. Finally, the transfer of VTLS to the Virginia Tech Foundation is consistent with existing statutory law. Our specific recommendations follow.

1. The Commonwealth of Virginia should be reimbursed to the extent of the \$53,000 estimated costs of development that, in 1974, Dr. Chachra anticipated would be necessary to produce the software system for the Newman Library.
2. The President of Virginia Tech should determine the extent to which the current VTLS replicates the original computer software used by the Newman Library in 1978, the year Dr. Chachra left his position as Director of the Systems Development Division. That portion of the existing VTLS which has been replicated should be assigned a current market value. This market value should be presumed to be at least \$2500 (equal to one-half of the initial selling price of VTLS) unless the President can establish with reasonable certainty that the amount is different. Any revenues accruing from the replicated portion of VTLS should be returned to the Foundation. No royalties should be paid to Dr. Chachra until the President completes his assessment.
3. The General Assembly may wish to consider establishing criteria by which the Governor may review and approve transfers of tangible and intangible personal property by colleges and universities to non-State entities.

* * * * *

APPENDIXES

	<u>Page</u>
Appendix A: Report of the Auditor of Public Accounts	18
Appendix B: 1973 University Copyright Policy	25
Appendix C: 1975 University Patent Policy	29
Appendix D: Agency Response	33



COMMONWEALTH of VIRGINIA

Auditor of Public Accounts

HARLES K. TRIBLE
AUDITOR

POST OFFICE BOX 1295
RICHMOND, VIRGINIA 23210
1804) 225-3350

October 3, 1984

The Honorable Ray D. Pethtel
Director, Joint Legislative Audit
and Review Commission
Suite 1100, 910 Capitol Street
Richmond, Virginia 23219

Dear Mr. Pethtel:

We have completed our review of the Virginia Tech Library System (VTLS) as requested in your letter of August 21, 1984. Specifically, the purpose of our review was to:

- 1) Determine the reasonableness of the University's audit methodology and the accuracy of its findings for determining certain costs associated with VTLS for the period October 1, 1975 through June 30, 1983,
- 2) Document and evaluate the current accounting procedures for VTLS revenues and expenditures, and
- 3) Document and evaluate the manner in which Dr. Vinod Chachra's royalties are determined.

Based upon the results of our examination we conclude that:

- . The costs to develop VTLS cannot be accurately determined.
- . The methodology utilized by the University task force to estimate VTLS revenues and expenditures attributable to marketing and sales activities was reasonable based upon the available information.
- . In connection with the assignment of VTLS proprietary rights by the University and Dr. Chachra to the Virginia Tech Foundation, all of the net revenues amounting to \$78,201.55 were paid by the University to the Foundation.

- . No reimbursement has been made to the general fund for any expenses related to the development of VTLS.
- . The current assignment of accounting responsibilities for VTLS revenues and expenditures is reasonable.
- . Our review of the University's copyright policy leads us to conclude that Dr. Chachra was not entitled to a share of the revenues because the system was developed as a specific part of a University assignment utilizing University facilities and resources.
- . The methodology established to calculate Dr. Chachra's royalties is not appropriate because the University did not recover the costs of development prior to dividing the "profits."

Our detailed findings to support the above conclusions are presented in the following format:

Project Expenditures
 Development Costs
 Marketing and Sales Costs

Transfer to the Foundation
 University Task Force
 APA Examination

Current Accounting Procedures
 Revenues
 Expenditures

Copyright Policy

Royalty Determination

PROJECT EXPENDITURES

Development Costs

In 1975, the University considered acquisition of an automated library system from an outside source at an estimated cost of \$250,000. Dr. Vinod Chachra, then the University's Director of Systems Development, evaluated the proposed system as a part of his routine duties and concluded that the University could develop a more advanced system in-house at an estimated cost of \$215,000. The proposal to proceed with in-house development was then approved by Alfred Krebs, the Vice-President for Academic Affairs.

The original version of VTLS was installed at the University in May, 1976. The system has undergone several modifications since that time with varying numbers of personnel assigned to VTLS development responsibilities.

Costs associated with the development of the system consisted primarily of salaries and equipment costs. These expenditures were borne by the University's Systems Development Department from its general fund operating budget.

Prior to 1982, personnel costs associated with a specific development project were charged to the employee's departmental operating budget rather than to individual project account codes. As a result, an accurate determination of the costs to develop VTLS cannot be made.

Marketing and Sales Costs

In October, 1975 an account was established in the Sponsored Projects account group¹ to account for several systems development projects. Prior to November 1, 1980, only \$4,154.03 was charged to this account, of which an unidentifiable portion was for unrelated projects. Effective November 1, 1980, the account was used solely to record costs incurred for VTLS development and promotion. For the period November 1, 1980 through June 30, 1983 expenditures of \$142,543.38 were charged to this account, representing equipment costs and costs of travel and supplies associated with demonstrating and promoting the sale of VTLS, but not salaries of the persons involved with these activities. These salaries were later estimated at \$31,210 based upon the travel time of the University personnel.

TRANSFER TO THE FOUNDATION

University Task Force

In December, 1983 the University and Dr. Chachra purportedly transferred their proprietary rights in VTLS to the Virginia Tech Foundation (Foundation). A portion of the accounting responsibilities were also transferred, retroactive to July 1, 1983.

¹Sponsored projects accounts consist of self-sustaining activities that are sponsored by non-general funds; used primarily to account for research projects funded by the Federal government, corporations, and private foundations.

The University assigned a task force to research the VTLS revenues and expenditures and to determine the amount of payment due to or from the Foundation in connection with the transfer.

The task force determined that prior to November 1, 1980, costs and revenues for VTLS were related to development of the system solely for implementation at the University and that, accordingly, all such costs were an appropriate charge to the general fund of the Commonwealth. After November 1, 1980, costs charged to the VTLS account were those incurred for the marketing, sale, and installation of the system to outside customers.

The following schedule summarizes the results of the task force's analysis:

Revenues:		
Sale of VTLS	\$202,605.00	
Maintenance and Update	50,736.65	
Other	<u>26,554.53</u>	
Total Revenues	\$279,896.18	
Less: Deferred Revenue on		
Maintenance Contracts	(15,000.00)	
Revenue Prior to Nov. 1, 1980	(12,941.25)	
VTLS Revenues		<u>\$251,954.93</u>
Expenditures:		
Direct Charges to VTLS Account	\$146,697.41	
Less: Charges Prior		
to Nov. 1, 1980	<u>(4,154.03)</u>	
Net Direct Charges	142,543.38	
Staff Salaries and Fringe		
Benefits - Marketing and Sales	<u>31,210.00</u>	
VTLS Expenditures		<u>173,753.38</u>
Net Revenue		<u>\$ 78,201.55</u>

Note: Salaries and fringe benefit costs were estimated per review of related travel vouchers.

APA Examination

Revenues

We obtained a listing of VTLS customers from the Foundation. Based upon our examination of University records and

discussions with Foundation personnel, we determined that all revenue derived from the customer listing provided by the Foundation had been properly accounted for by the task force.

Expenditures

We examined vouchers for \$141,723.71 of the \$142,543.38 of direct charges identified by the task force. In our opinion, the vouchers were supported by adequate documentation and were related to marketing and sales activities of VTLS.

We reviewed the travel vouchers used to estimate personnel costs associated with the marketing and sale of VTLS. In our opinion, the hours and rates used to estimate those costs were reasonable based upon the information contained on the voucher.

Payment

Based upon the work of the task force, net revenues attributable to the marketing and sale of VTLS totaled \$78,201.55 at June 30, 1983. This amount was paid by the University to the Foundation on March 7, 1984 from the balance of VTLS Sponsored Projects funds. No income derived from the sales was realized by the University due to this payment. The net effect of the transaction was to transfer to the Foundation not only the asset (system) but all net gain realized from its sale prior to the transfer.

No reimbursement has been made to the general fund for any expenses related to the development of VTLS for University purposes.

University Methodology

In our opinion, the methodology used by the task force to estimate VTLS revenues and expenditures attributable to marketing and sales activities was reasonable based upon the information and records available to the task force. Because the accounting procedures did not identify personnel costs by project during the period November 1, 1980 through June 30, 1982, the task force's expenditure total of \$173,753.38 may be a minimum estimate of marketing and sales costs. However, nothing came to our attention to indicate that significant items of expenditure were not included in the total.

CURRENT ACCOUNTING PROCEDURES

Revenues

Effective July 1, 1983 revenues generated by VTLS are collected and accounted for by the Foundation. These revenues are deposited directly to Foundation bank accounts.

Expenditures

The majority of VTLS expenditures are accounted for through the University's Office of Sponsored Programs. Personnel costs are allocated to the VTLS account on the basis of timesheets submitted quarterly by employees working on marketing or sales activities. All other related costs are charged directly to the VTLS account. The Foundation reimburses the University on a periodic basis for expenses charged to the VTLS account.

Mr. Ray Smoot, University Treasurer and Secretary-Treasurer of the Foundation, noted that the Foundation may occasionally pay expenses related to VTLS that are not recorded in the University account (example: product liability insurance). He estimated the amount of such expenditures to be minimal.

Conclusion

Based upon our evaluation, the current division of accounting responsibilities for VTLS revenues and expenditures is reasonable.

In our opinion, the procedures utilized by the University are adequate to provide proper accounting for VTLS expenditures made through the University.

Because the Foundation is a private corporation, we have not examined the accounts and records of the Foundation or evaluated the adequacy of its accounting procedures for VTLS revenue and miscellaneous expenditures. Accordingly, we render no opinion on said procedures.

COPYRIGHT POLICY

The copyright policy, adopted by the Board of Visitors on February 28, 1973, specifies the rights of staff (including faculty) and those of the University. In the introduction section, the policy states that "[t]he University gains a right to materials subject to copyright when the materials result from an assigned duty of a member of the staff of the University, when the University provides funds for the production of the materials, or when substantial use of University facilities and resources is made in the production of the materials...." All of these criteria are present in the development of VTLS. Sections two and three of the policy prescribe, respectively, the professional rights of the staff and the proprietary interests of the University. Staff rights exist as to "...materials which they have prepared on their own initiative without substantial use of University facilities and resources." Section three provides that "[t]he University shall own all rights to all materials written or produced by a University employee as a normal part of his assigned duties."

The foregoing provisions of the policy, in our opinion, vested all rights to the VTLS in the University.

ROYALTY DETERMINATION

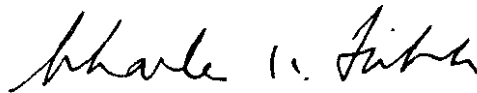
The agreement between the University, Dr. Chachra, and the Foundation dated December 15, 1983 documents the method to be utilized to calculate VTLS royalty payments. The calculation is based upon accounting information provided by both the University and the Foundation.

Based upon our evaluation of the entire matter, the methodology established to calculate Dr. Chachra's royalties is not appropriate because a "profit" was recognized prior to the recovery of the costs to develop the VTLS. The University's position is that the VTLS was needed by the library and that the development costs should be borne by the Commonwealth without regard to the commercial aspect of the system. This position is not proper, as it ignores the fact that what is being sold was paid for by the State, should have been treated as any other asset of the State, and even if it is determined that Dr. Chachra or any other University staff member is entitled to any share of the "profits," no "profits" exist until the cost has been recovered by the State.

CLOSING

I trust that this report satisfactorily addresses the issues raised in your request of August 21, 1984. If I can be of further assistance, please contact me.

Sincerely,



Charles K. Tribble
AUDITOR OF PUBLIC ACCOUNTS

CKT/ROB:gpl

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Blacksburg, Virginia

UNIVERSITY COPYRIGHT POLICY

(Adopted by Board of Visitors February 28, 1973)

1. Introduction

It has long been a recognized right of members of the faculty to write and produce materials subject to copyright, and to copyright those materials and to receive royalties resulting from their use. The University encourages these activities.

The University gains a right to materials subject to copyright when the materials result from an assigned duty of a member of the staff of the University, when the University provides funds for the production of the materials, or when substantial use of University facilities and resources is made in the production of the materials, including the case when funds and facilities are provided by outside sponsors.

2. Professional Rights of the University Staff
(Including the Faculty)

(a) General

The staff shall retain all rights relating to publication, distribution and classroom use of materials which they have prepared on their own initiative without substantial use of University facilities and resources.

(b) Consulting Work

Staff members desiring to perform consulting work for outside organizations are required to obtain prior approval as specified in the Faculty Handbook. Materials developed solely in the course of consulting work performed for outside organizations for which approval has been obtained shall not be considered as having been made or developed in the course of University employment unless otherwise provided in the President's approval. Accordingly, all rights to such materials, other than those involving the substantial use of University funds or facilities, shall remain with the individual, subject to any agreement he may have with the outside organization.

3. Proprietary Interests of the University

The University shall own all rights to all materials written or produced by a University employee as a normal part of his assigned duties. When the University acquires a right through authorized substantial use of University funds or facilities in the production of materials resulting from a staff member's own initiative, the University shall copyright the materials, and the University and the staff member shall share equally in any royalties.

The University reserves the right to negotiate and enter into contracts for the exercise, sale, or other disposition of any and all rights in materials in which the University has a proprietary interest as defined herein, on such terms and conditions and for such consideration, if any, as the University shall determine.

If the University fails to make progress toward publication of materials in which the staff member has a share within a period of 12 months, ownership of the materials shall pass to the staff member upon his written request to the University Committee on Copyrights.

Materials in which the University has a proprietary interest but which are the result of the individual initiative of a staff member may be reviewed by the staff member after five years for obsolescence. If he considers the materials to be obsolete, he has the right to refer the matter to the University Committee on Copyrights, with recommendation for disposal of the material.

4. Sponsor-Supported Effort

Funds and facilities provided by governmental, commercial, industrial or other private organizations which are administered and controlled by the University, shall be considered to be funds and facilities provided by or through the University for the purpose of this policy statement. Agreement between the University and the sponsor pertaining to share of royalties and title to copyrightable materials shall be the responsibility of the University.

5. The University Committee on Copyrights

A University Committee on Copyrights, appointed by the President, will consist of five faculty members actively involved in copyright matters,

and an administrator. The faculty members are to be appointed by the President upon nomination by the Faculty Senate. All terms are rotating for 3 years, and members may be reappointed.

6. Procedures for Reporting and Committee Action

(a) Report of Materials

All materials in which the University may have a proprietary interest under the provisions of this policy shall be promptly reported in writing by University personnel concerned through his department head and dean to the Committee. If more than one individual participated in the development, the report shall be signed by all such participants. The report shall constitute a full and complete disclosure of the subject matter of the materials concerned and the identity of all persons participating in the development. The participants shall furnish such additional information and execute such documents from time to time as the Committee may reasonably request. Unless the Committee recommends otherwise within sixty (60) days from receipt of the report, all rights in reported materials shall belong to the staff member.

Any work, in which the University has proprietary interest, in progress at the time this policy is adopted shall be reported promptly to the Committee.

(b) Action by the Committee

The Committee shall consider promptly all reports of materials and shall determine whether to apply for a copyright on behalf of the University.

In any case where the rights of the University and of any employee appear to be in conflict, the Committee shall make a finding as to ownership and shall report such finding to the President for final resolution. University personnel involved shall be entitled to appear before the Committee and present evidence with respect to the report. The Committee's determination shall be made in writing and shall contain a statement of its findings and grounds of decision.

In any case where the matter of obsolescence is brought to it, the Committee shall make a determination to the extent of obsolescence and also shall make a recommendation for possible correction of the material. University personnel involved

shall be entitled to appear before the Committee and present evidence with respect to the recommendation. The Committee's recommendation shall be made in writing and shall contain a statement of its findings and grounds of decision.

(c) Review of Committee Action

The President of the University may review any determination of the Committee, and he shall do so at the request of any interested party. He may affirm, modify, or reject any determination of the Committee.

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Blacksburg, Virginia

UNIVERSITY PATENT POLICY

(Adopted by Board of Visitors August 17, 1970; revised January 19, 1972; revised November 23, 1974)

1. A University Committee on Patents

A University Committee on Patents (hereinafter referred to as "the Committee"), appointed by the President, will consist of four faculty members involved in activities with patent potentials, one of the Vice Presidents selected by the President, the Dean of the Research Division, and the University's General Counsel. Of the four faculty members, there will be one each from the Colleges of Agriculture, Arts and Sciences, and Engineering. The fourth member may be from any of the other colleges. The faculty members are to be appointed by the President. The authorities and responsibilities of the Committee are stated below. All terms are for 3 years subject to reappointment.

2. Patentable Discoveries and Inventions

Any faculty member, staff member, or student of the University who has made a discovery or invention which in his judgement appears to be patentable, or upon which he plans to seek to obtain a patent, shall bring such discovery or invention to the attention of the Dean of the Research Division for the purpose of determining whether and to what extent the University has a property interest in the discovery or invention. Such discoveries should be disclosed as promptly as possible, and should be evaluated by the Committee prior to disclosure to any other party. Each discovery or invention should be disclosed regardless of whether or not the inventor(s) plan to exploit the discovery or invention for financial gain. Failure to make the required disclosure will result in a forfeiture of any proceeds or profits which the University would otherwise be obligated to pay pursuant to this policy.

The University shall obtain, except as herein provided, the entire right, title, and interest in and to any invention made by any faculty member, staff member, or student of the University (a) during working hours, or (b) with a contribution by the University of facilities, equipment, materials, funds, or information, or of time or services of other University employees during working hours, or (c) which bears a direct relation to or is made in consequence of the official duties of the inventor. The University claims no interest in the patent if University facilities, services, funds, or time have

not been used. An example would be inventions resulting from pursuance of a hobby, not related to his University activities and conducted off campus.

In any case where the contribution of the University as measured by the foregoing criteria is de minimis and is insufficient equitably to justify the requirement of assignment to the University of the entire right, title, and interest, the University shall reserve an exclusive, irrevocable, royalty-free license in the invention with power to grant licenses for all University purposes.

For purposes of this policy, it shall be deemed that an invention made by an employee who is employed or assigned (a) to invent or improve or perfect any art, machine, design, manufacture, or composition of matter, (b) to conduct or perform research, development work, or both, (c) to supervise, direct, coordinate, or review University financed or conducted research or development work, or both, or (d) to act in a liaison capacity with agencies or individuals engaged in such research or development, has engaged in activities which confer right, title, and interest in the patent to the University.

3. Ownership of Discoveries and Inventions

(a) Outside Ownership. Certain research projects sponsored by governmental agencies, industrial organizations, or others may entitle the sponsors to ownership of a discovery or invention made by a faculty member, staff member, or student of the University without payment of any royalty. This would be the general rule when the sponsor provides funds for the entire project and in research involving testing a product or products developed by the sponsor. The Dean of the Research Division is authorized to ratify such agreement on patent matters where it is necessary to do so as a prerequisite to University participation in the project or receipt of a grant. The determination of the Dean of the Research Division will be subject to review by the Committee.

(b) Faculty, Staff, or Student Ownership. A discovery or invention developed by a faculty member, staff member, or student shall be the exclusive property of the inventor(s), if: (i) the University has contributed no funds, facilities, or time of the inventor(s) and (ii) if the discovery or invention is not along lines related to any University research program then in progress or completed within the past twelve (12) months with which the inventor(s) may have a connection.

(c) Disputed Ownership. Should any differences of opinion develop as to ownership of the discovery or invention, the determination of equities between inventor(s) and the University shall be recommended to the President by the Committee. The Committee's decision shall be subject to review by the President. The Committee shall also serve in an advisory capacity to assist co-inventors in establishing equitable distribution of ownership.

4. Authority and Responsibility of the Committee

The Committee shall have the following authority and responsibility with respect to discoveries and inventions:

- (a) To require, receive, and act upon reports of discoveries and inventions and all matters relative thereto.
- (b) To determine the ownership of discoveries and inventions and to determine the dates of their conception, disclosure, and reduction to practice.
- (c) To determine the equities of the University, the inventor(s), and other parties in discoveries and inventions and to provide equitably for the sharing of royalties between the University and the inventor(s) in any patented or patentable discovery or invention in which the University has a property interest, in accordance with Section 5.
- (d) To determine, in the case of a discovery or invention in which the University has a property interest, whether the University should attempt to obtain a patent or should submit the discovery or invention to one of the University's patent agencies, subject to the provisions of § 6 infra. Such determination must be made within ninety (90) days from the date of disclosure of the discovery or invention to the Committee unless it is mutually agreed by the Committee and the inventor(s) that more time is needed and a new deadline date is set. The inventor(s) shall have the right to make recommendations pertaining to such determinations. In the event that such determination is not made within the agreed time, the University forfeits its property interest in the discovery or invention and all rights revert to the inventor(s).
- (e) If the discovery or invention in which the University has a property interest is submitted to one of the University's patent agencies, and if the patent agency decides not to file or abandons an application for patent, then the Committee shall determine whether the University shall file or proceed with an application, or shall assign any right which the University may have in the discovery or invention to the inventor(s). Such determination shall be made at the earliest possible date and in no case later than (60) days after receipt of the notice from the University's patent agency of a determination not to file or of abandonment of an application.

- (f) To report its findings to the President of the University on all matters bearing on patents and this policy on patents.

5. Sharing of Royalties

The share of the inventor(s) shall be 50% of any income received by the University from royalties on the patent, except that, in any case where the University does not use the services of a patent management corporation, the share of the inventor(s) shall be 50% of net income from royalties after deduction of direct costs to the University of obtaining, defending, and managing the patent.

Payments received by the University or its agents for an invention or innovation that is not yet patented, including those that may not be patentable, will be distributed in accordance with this policy.

6. Management and Exploitation of University Patents

The President of the University shall determine the manner in which patents which are the property of the University shall be managed and exploited. However, the inventor(s) shall have the right to make recommendations to the President on such matters.

APPENDIX D:

AGENCY RESPONSE

State agencies involved in a JLARC evaluation effort are given the opportunity to comment on an exposure draft of the report, and appropriate corrections are made. Page references in a response may not correspond to the page numbers in this final report.



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

OFFICE OF THE PRESIDENT

December 6, 1984

Mr. Ray D. Pethtel
Director
Joint Legislative Audit and Review Commission
Suite 1100
910 Capitol Street
Richmond, Va. 23219

Dear Ray:

At the request of Phillip Leone, I am responding to the recommendations in JLARC's report on the Virginia Tech Library System dated November 12, 1984.

In response to recommendation one, Virginia Tech has agreed to reimburse the general fund in the amount of \$53,000, representing the anticipated cost of development identified in 1974 to produce a library automation software system for Newman Library. While one might take the view that it is not necessary to reimburse development cost when the institution has acquired the developed product, Virginia Tech has agreed to make the reimbursement as recommended in order to resolve the issue of general fund support to VTLS.

Recommendation two states that the President of Virginia Tech should determine the extent to which the current VTLS replicates the original computer software used by Newman Library in 1978 and that portion of the existing VTLS which has been replicated should be assigned the current market value. Any revenues accruing from the replicated portion of VTLS should be returned to the Foundation and no royalties should be paid pursuant to the software policy until this assessment is completed. The University concurs in this recommendation and I have asked for an analysis to identify revenues accruing from the replicated portion at the time of each sale. Royalty payments will not be made until this assessment is completed.

Recommendation three suggests that the General Assembly may wish to consider authorizing the Governor to review and approve transfers of intellectual properties by colleges and universities to non-state entities. As I suggested in previous conversations, I believe this issue would more properly be addressed in a study of the state-wide administration of intellectual properties.

I wish to express appreciation to you, Phillip Leone, and Carl Schmidt for the professional manner in which this study was conducted and for the opportunity to react to the draft report prior to submission to the commission. Should you have questions concerning our response to the recommendations, please let me know.

Sincerely,

W. E. Lavery
President

JLARC STAFF

RESEARCH STAFF

Director

Ray D. Pethel

Deputy Director

● Philip A. Leone

Division Chiefs

Glen S. Tittermary, Division I

Kirk Jonas, Division II

Section Managers

Gary T. Henry, Research Methods
& Data Processing

John W. Long, Publications & Graphics

Project Team Leaders

Joseph H. Maroon

Barbara A. Newlin

Walter L. Smiley

Shepherd Zeldin

Project Team Staff

Lynn L. Grebenstein

Peter J. Haas

Stephen W. Harms

Clarence L. Jackson

Mary S. Kiger

Thomas J. Kusiak

Sarah J. Larson

Susan E. Massart

Cynthia Robinson

Robert B. Rotz

● Carl W. Schmidt

E. Kim Snead

Nolani Taylor

ADMINISTRATIVE STAFF

Section Manager

Joan M. Irby, Business Management
& Office Services

Administrative Services

Maryann Craven

Secretarial Services

Bonnie A. Blick

Rosemary B. Creekmur

Betsy M. Jackson

SUPPORT STAFF

Technical Services

R. Jay Landis, Computers

David W. Porter, Graphics

Debra J. Rog, Associate
Methodologist

Interns

William A. Butcher

Geraldine A. Turner

Nelson Wikstrom (Senior Intern)

● *Indicates staff with primary
assignment to this project.*

**RECENT REPORTS ISSUED BY THE
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION**

Inpatient Care in Virginia, January 1979
Outpatient Care in Virginia, March 1979
Management and Use of State-Owned Vehicles, July 1979
Certificate-of-Need in Virginia, August 1979
Report to the General Assembly, August 1979
Virginia Polytechnic Institute and State University Extension Division, September 1979
Deinstitutionalization and Community Services, September 1979
Special Study: Federal Funds, December 1979
Homes for Adults in Virginia, December 1979
Management and Use of Consultants by State Agencies, May 1980
The General Relief Program in Virginia, September 1980
Federal Funds in Virginia, October 1980
Federal Funds: A Summary, January 1981
Methodology for a Vehicle Cost Responsibility Study: An Interim Report, January 1981
Organization and Administration of the Department of Highways and Transportation: An Interim Report, January 1981
Title XX in Virginia, January 1981
Organization and Administration of Social Services in Virginia, April 1981
1981 Report to the General Assembly
Highway and Transportation Programs in Virginia: A Summary Report, November 1981
Organization and Administration of the Department of Highways and Transportation, November 1981
Highway Construction, Maintenance, and Transit Needs in Virginia, November 1981
Vehicle Cost Responsibility in Virginia, November 1981
Highway Financing in Virginia, November 1981
Publications and Public Relations of State Agencies in Virginia, January 1982
Occupational and Professional Regulatory Boards in Virginia, January 1982
The CETA Program Administered by Virginia's Balance-of-State Prime Sponsor, May 1982
Working Capital Funds in Virginia, June 1982
The Occupational and Professional Regulatory System in Virginia, December 1982
Interim Report: Equity of Current Provisions for Allocating Highway Construction Funds in Virginia
December 1982
Consolidation of Office Space in the Roanoke Area, December 1982
Staffing and Manpower Planning in the Department of Highways and Transportation, January 1983
Consolidation of Office Space in Northern Virginia, January 1983
Interim Report: Local Mandates and Financial Resources, January 1983
Interim Report: Organization of the Executive Branch, January 1983
The Economic Potential and Management of Virginia's Seafood Industry, January 1983
Follow-Up Report on the Virginia Department of Highways and Transportation, January 1983
1983 Report to the General Assembly, October 1983
The Virginia Division for Children, December 1983
The Virginia Division of Volunteerism, December 1983
State Mandates on Local Governments and Local Financial Resources, December 1983
An Assessment of Structural Targets in the Executive Branch of Virginia, January 1984
An Assessment of the Secretarial System in the Commonwealth of Virginia, January 1984
An Assessment of the Roles of Boards and Commissions in the Commonwealth of Virginia,
January 1984
Organization of the Executive Branch in Virginia: A Summary Report, January 1984
1983 Follow-up Report on the Virginia Department of Highways and Transportation, January 1984
Interim Report: Central and Regional Staffing in the Department of Corrections, May 1984
Equity of Current Provisions for Allocating Highway and Transportation Funds in Virginia, June 1984
Special Education in Virginia's Training Centers for the Mentally Retarded, November 1984
Special Education in Virginia's Mental Health Facilities, November 1984
Special Report: ADP Contracting at the State Corporation Commission, November 1984
Special Report: The Virginia State Library's Contract With The Computer Company, November 1984
Special Report: The Virginia Tech Library System, November 1984