

**NORTH DAKOTA UNIVERSITY SYSTEM  
CONNECTND FINANCE**

**INFORMATION SYSTEM AUDIT**  
For the Fiscal Year ended June 30, 2008

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## TABLE OF CONTENTS

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<b>Transmittal Letter</b> .....	<b>1</b>
<b>Executive Summary</b> .....	<b>2</b>
Significant Recommendations .....	2
<b>Background Information</b> .....	<b>3</b>
<b>Objectives, Scope, and Methodology</b> .....	<b>5</b>
<b>Are security roles designed to provide access based on a demonstrated need to view, add, change, or delete data?</b> .....	<b>6</b>
Summary of Audit Work Performed .....	6
Audit Findings .....	6
Maintenance of unnecessary and unassigned roles and permission lists .....	6
Excess superuser access .....	7
Developer access to PeopleSoft production environment.....	7
Auditor's Opinion.....	8
<b>Do other modules properly record financial data in the general ledger and Project Resources?</b> .....	<b>9</b>
Summary of Audit Work Performed .....	9
Audit Findings .....	9
Financial data in other modules not in agreement with the general ledger.....	9
Auditor's Opinion.....	10
<b>Do the Grants and Contracts modules properly record financial data in the general ledger and project Resources?</b> .....	<b>11</b>
Summary of Audit Work Performed .....	11
Auditor's Opinion.....	11

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## TRANSMITTAL LETTER

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October 28, 2008

The Honorable John Hoeven, Governor  
Members of the North Dakota Legislative Assembly  
Bill Goetz, Chancellor, North Dakota University System  
Pam Sharp, Director, Office of Management and Budget

Transmitted herewith is the information system audit of ConnectND Finance for the fiscal year ended June 30, 2008. This audit resulted from the statutory responsibility of the State Auditor under NDCC § 54-10-01.

ConnectND Finance is used to support integrated, enterprise-wide business processes and maintain the official accounting records according to generally accepted accounting principles for the state of North Dakota and the North Dakota University System.

ConnectND Finance was selected for this audit because it is considered a high-risk information system. ConnectND Finance is considered "high-risk" because it is a relatively new system and is the primary financial system used by the majority of North Dakota University System institutions and state agencies. The term "high-risk" does not necessarily indicate that the system has problems, but indicates a higher potential for significant problems to occur.

Inquiries or comments relating to this audit may be directed to Donald LaFleur, Information Systems Audit Manager, by calling (701) 328-4744. We wish to express our appreciation to the North Dakota University System and the Office of Management and Budget for the courtesy, cooperation, and assistance provided to us during this audit.

Respectfully submitted,

Robert R. Peterson  
State Auditor

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## EXECUTIVE SUMMARY

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The purpose of this report is to provide our analysis, findings, and recommendations regarding our audit of the North Dakota University System ConnectND Finance system. While primarily an information system audit, we also addressed operational issues related to the system and its operation.

ConnectND Finance supports integrated, enterprise-wide business processes and maintains the North Dakota University System's and state of North Dakota's official accounting records according to generally accepted accounting principles.

This audit focused primarily on the University System's use of ConnectND Finance, but included testing on the state where noted.

### Significant Recommendations

We reviewed **security** roles to ensure they had been properly designed and superuser accounts to determine if they were necessary. We had the following findings:

- Developers have access to the production environment.
- There are users who have unnecessary superuser access.
- There are unnecessary security roles and permission lists.

We reconciled **other modules** to the general ledger and project resources and noted one finding:

- Financial data in other modules does not always agree to the general ledger.

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## BACKGROUND INFORMATION

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### System Overview

The Office of Management and Budget and the North Dakota University System Office are responsible for administering ConnectND Finance. The Information Technology Department (ITD) is responsible for maintaining and securing the application and database servers used by ConnectND Finance. ITD also aids in installing upgrades and in implementing changes to the application.

ConnectND Finance is comprised of several modules. The main modules that have been implemented are Accounts Payable, Accounts Receivable, Asset Management, Billing, Contracts, General Ledger, Grants, Project Costing, and Purchasing.

The **Accounts Payable** module manages cash disbursements. This module is being used to make purchases of goods and services from an approved table of vendors. Accounts Payable is integrated with Purchasing, which allows the state to track a purchase from the original purchase order to the payment, to the vendor and to the receipt of the purchased assets.

The **Accounts Receivable, Billing, and Contract** modules process and record revenue and receivables related to sponsored research (grants and contracts). These three modules, along with Grants and Project Costing, are used for sponsored research administration.

The **Asset Management** module accounts for University System property. This module records the additions and retirements of University System capital property as well as any depreciation. The module is also used to track the locations of that property.

The **General Ledger** module stores balance sheet, revenue, and expenditure activity for all agencies and schools while maintaining separate unique accounting environments for each of them. All other modules are integrated with the General Ledger so that the financial data from the other modules is recorded into the General Ledger. The General Ledger module is currently being used to maintain budget information and record journal entries.

The **Grants** module supports the key business processes that are associated with the administration of sponsored research activities. Grants leverages functionality that is delivered within Contracts, Project Costing, General Ledger, and Billing to provide a fully integrated Grants Management solution.

The **Project Costing** module captures transactional activity for all grants and contracts activity, including original transactions and some transactions that originate in Project Costing (e.g. facilities & administration).

The **Purchasing** module provides automation of the business processes for the procurement of goods and services. This module aids in maintaining the vendor list for the entire state and allows for the creation of requisitions and purchase orders.

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## OBJECTIVES, SCOPE, AND METHODOLOGY

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The objective of this audit of ConnectND Finance for the fiscal year ended June 30, 2008 was to answer the following questions:

1. Are security roles designed to provide access based on a demonstrated need to view, add, change, or delete data?
2. Do other modules properly record financial data in the general ledger and project resources?
3. Do the Grants and Contracts modules properly record financial data in the general ledger and project resources?

This audit was conducted in accordance with *Standards for Information Systems Auditing* issued by the Information Systems Audit and Control Association and *Government Auditing Standards* issued by the Comptroller General of the United States.

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## ARE SECURITY ROLES DESIGNED TO PROVIDE ACCESS BASED ON A DEMONSTRATED NEED TO VIEW, ADD, CHANGE, OR DELETE DATA?

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### Summary of Audit Work Performed

We obtained and reviewed a list of ConnectND Finance roles and their access rights for the North Dakota University System (NDUS) and the state of North Dakota. We reviewed these roles to ensure the access they provided was consistent with their stated purpose. We reviewed default accounts to ensure they were being locked in a timely manner. We tested superuser accounts to determine if the access was necessary and appropriate. We identified unused roles and permission lists.

### Audit Findings

#### Maintenance of unnecessary and unassigned roles and permission lists

We created queries to pull unused roles, unused permission lists, and permission lists attached only to unused roles that have been created by the state or University System. There were roles and permission lists that met the criteria. Extra or unused roles and permission lists complicate security and should be removed as part of good housekeeping.

#### **Recommendation:**

We recommend the North Dakota University System and the Office of Management and Budget delete created roles and permission lists that are unassigned and unnecessary.

#### **Agency Response:**

##### North Dakota University System

We concur. The University System has deleted roles and permission lists that are unassigned and not otherwise necessary.

##### Office of Management and Budget

We have complied with this audit recommendation. All but one unassigned role was deleted in PeopleSoft. The NDS\_ALL\_VENDOR\_INQ\_ACH role is a new role and will be assigned to users in the immediate future. All but two unassigned permission lists were deleted. The NDC\_PS\_QUERY\_USER permission list is required. If removed, this permission list would need to be recreated in NDFY reporting environment each time the environment is refreshed. The NDS\_VENDOR\_INQ\_ACH permission list is a new permission list and will be assigned to the NDS\_ALL\_VENDOR\_INQ\_ACH role in the immediate future.

## **Excess superuser access**

Good internal controls require that you grant access rights based on a demonstrated need. A superuser account is an account that has access to all or nearly all functions, or can modify security. Unnecessary superuser access increases the risk that errors and irregularities could occur. We noted superuser accounts that we considered to be inappropriate.

### **Recommendation:**

We recommend the North Dakota University System and the Office of Management and Budget limit superuser access to only those individuals with a demonstrated need for superuser access.

### **Agency Response:**

#### **North Dakota University System**

We concur. The University System will review which individuals have superuser access and evaluate the appropriateness of that access.

#### **Office of Management and Budget**

OMB has complied with this audit recommendation. We reviewed the list of individuals with superuser access and took it away from those who we determined did not need it. We also provided the State Auditor's Office a list of individuals who will have superuser access. Many of the superusers were the PeopleSoft IT developers and their security access is addressed in the recommendation below.

## **Developer access to PeopleSoft production environment**

Software developers have access to the production environment in ConnectND Finance. This increases the likelihood of unauthorized access to confidential or sensitive information and fraud. Proper segregation of duties requires software developers' access to the production environment be limited.

### **Recommendation:**

We recommend the North Dakota University System and the Office of Management and Budget properly limit developer's access to the production environment.

### **Agency Response:**

#### **North Dakota University System**

We concur. The University System will work with OMB and the State Auditor's Office to define a level of access for developers that allows them to provide necessary assistance with production issues, while respecting an appropriate segregation of duties. The proper balance is critically important since programmers provide front-line support to help troubleshoot and resolve user problems and must be able to replicate user functionality.

#### **Office of Management and Budget**

OMB agrees with this audit recommendation and will limit the PeopleSoft IT developers' security access in the production environment. We will work closely with the State Auditor's Office and

the PeopleSoft IT development team to create the roles and permission lists necessary for the developers to maintain and enhance the PeopleSoft production environments.

### **Auditor's Opinion**

In our opinion, security roles provide access based on a demonstrated need to view, add, change, or delete data, except as noted above.

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## DO OTHER MODULES PROPERLY RECORD FINANCIAL DATA IN THE GENERAL LEDGER AND PROJECT RESOURCES?

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### Summary of Audit Work Performed

We reconciled detail records for other modules in ConnectND Finance to general ledger journal entries and project resource entries. We performed reconciliations for:

- Accounts Payable
- Accounts Receivable
- Billing

We also reconciled detail records for ConnectND HRMS to general ledger journal entries and project resource entries in ConnectND Finance.

The reconciliations were all done in a similar manner. We created a query to summarize the detailed data from the modules and created a query to summarize general ledger journal entries and project resource entries. We compared the results of the queries by all the relevant chart fields and researched any differences.

### Audit Findings

#### Financial data in other modules not in agreement with the general ledger

In reconciling the sub-module records to general ledger journal entries we found that the data does not always agree. Differences are mostly in the account, fund, or project used not in amount. These differences are likely the result of the general ledger journal entry produced by the module being edited prior to posting it to the general ledger. Data in the other modules must agree to what is recorded in the general ledger to maintain the integrity of the data. If the modules do not agree to the general ledger it is difficult to rely on the detailed data from the modules.

#### **Recommendation:**

We recommend the North Dakota University System and the Office of Management and Budget ensure that financial data within the modules agrees with the general ledger.

#### **Agency Response:**

##### North Dakota University System

We concur. Through continued analysis of specific audit findings, the University System will confirm whether the financial system is the cause or not for differences between the general ledger and other modules. If it is found that changes made at the institutional level are the cause of the differences, institutions will be reminded to only change system-generated transactions manually in rare circumstances, and then to clearly document the need for the manual changes.

##### Office of Management and Budget

OMB agrees with this recommendation and will comply in the future. OMB does monitor the financial data within the PeopleSoft modules to determine they are in sync. When problems are

found, OMB analyzes what went wrong and determines how to correct them. OMB was aware of the instances cited by the State Auditor's Office and had made corrections to the general ledger to fix what were system problems. We did not in all cases correct the sub-module records.

### **Auditor's Opinion**

In our opinion, the module detailed data does not agree to the general ledger in all instances.

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## **DO THE GRANTS AND CONTRACTS MODULES PROPERLY RECORD FINANCIAL DATA IN THE GENERAL LEDGER AND PROJECT RESOURCES?**

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### **Summary of Audit Work Performed**

We reviewed the grants and contracts process used by the North Dakota University System. We reconciled grants and contracts detail records to general ledger journal entries and project resources entries. We created a query to extract the detailed data from modules. We created a query to extract general ledger and project resource entries. We compared the results of the queries by all relevant chart fields. Finally, we researched any differences.

### **Auditor's Opinion**

In our opinion, the Grants and Contracts modules properly record financial data in the general ledger and project resources.