February 12, 2014

TERRENCE J. SEJNOWSKI  
Director  
Institute for Neural Computation  
0523

GERT CAUWENBERGHS  
Co-Director  
Institute for Neural Computation  
0412

Subject: Institute for Neural Computation  
Audit & Management Advisory Services Project 2014-10C

The final audit report for Institute for Neural Computation, Audit Report 2014-10C, is attached. We would like to thank all members of the department for their cooperation and assistance during the audit.

The findings included in this report will be added to our follow-up system. While management corrective actions have been included in the audit report, we may determine that additional audit procedures to validate the actions agreed to or implemented are warranted. We will contact you to schedule a review of the corrective actions at the appropriate time.

UC wide policy requires that all draft audit reports, both printed (copied on tan paper for ease of identification) and electronic, be destroyed after the final report is issued. Because draft reports can contain sensitive information, please either return these documents to AMAS personnel or destroy them. We also request that draft reports not be photocopied or otherwise redistributed.

David Meier  
Assistant Vice Chancellor  
Audit & Management Advisory Services

Attachment

cc: S. Brown  
P. Gorospe  
C. Hudson  
D. Larson  
G. Matthews  
S. Subramani  
S. Vacca
Table of Contents

I. Background ........................................................................................................................................ 1
II. Audit Objective, Scope, and Procedures ......................................................................................... 1
III. Conclusion ...................................................................................................................................... 2
IV. Observations and Management Corrective Actions .................................................................... 2
    A. Effort Reporting ....................................................................................................................... 2
    B. Information Systems ............................................................................................................. 3
    C. Express Card Administration ............................................................................................... 4
    D. Travel Expenditures .............................................................................................................. 6
    E. Transaction Sampling ............................................................................................................ 7

ATTACHMENT A – Audit Results by Business Office Functional Process
I. Background

Audit & Management Advisory Services (AMAS) completed a review of Institute for Neural Computation (INC) as part of the approved audit plan for Fiscal Year 2013-14. This report summarizes the results of our review.

The Institute for Neural Computation (INC) is an Organized Research Unit\(^1\) (ORU) established at University of California San Diego in 1990. The organization is a diverse research community represented by 44 affiliated faculty representing 14 different disciplines across campus. The mission is to bring together a diverse research community in the basic sciences, medical and engineering disciplines to advance and promote the science of computation and learning based on the multiscale, parallel, and highly adaptive architecture found in biological neural systems.

INC consists of the following centers and labs:
- Center for Advanced Neurological Engineering (CANE),
- Computational Face Group,
- Computational Neurobiology Laboratory,
- Data Intensive Cyber Environments (DICE) Center,
- Dynamics of Motor Behavior Laboratory (DMBL),
- Integrated Systems Neuroengineering,
- Machine Perception Laboratory (MPL),
- ONR MURI Center for the Neural Bases of Unsupervised Learning and Training,
- Poizner Laboratory,
- Structural Biology Laboratory,
- Swartz Center for Computational Neuroscience (SCCN), and
- Temporal Dynamics of Learning Center.

II. Audit Objective, Scope, and Procedures

The objective of our review was to determine whether key internal controls were adequate to provide reasonable assurance that operations were effective, in compliance with University policy, and resulted in accurate financial reporting. The scope of this review was limited to activities and business practices for the Fiscal Year ended June 30, 2013, and for the period July 1 through November 30, 2013.

In order to achieve our objectives we completed the following:

---

\(^1\) An Organized Research Unit (ORU) is an academic unit the University has established to provide a supportive infrastructure for interdisciplinary research that complements the academic goals of departments.
Institute for Neural Computation  
Audit & Management Advisory Services Project 2014-10C

- Reviewed departmental organization and financial information;
- Met with management to discuss any potential areas of concern;
- Requested and reviewed departmental responses to internal control questionnaires and separation of duties matrices;
- Reviewed departmental policies and procedures for key business processes;
- Reviewed Integrated Financial Information System (IFIS) approval templates, and the Business Unit Management Tool (BUMT) Marketplace roles;
- Reviewed the Transaction Sampling Management Report for the year ended June 30, 2013; and
- Performed limited transaction testing over select business processes, as summarized in Attachment A.

III. Conclusion

We concluded that INCs internal controls were adequate to provide reasonable assurance that operations were effective, performed in compliance with University policy, and resulted in accurate financial reporting. INC has a seasoned business office leadership team that is focused on ensuring that appropriate internal controls are integrated into business processes. However, we did note some opportunities for improvement, which are noted in the balance of this report.

Our summary of results by business office functional area is provided as Attachment A.

IV. Observations and Management Corrective Actions

A. Effort Reporting

Required quarterly certifications of effort charged to federal sponsored research fund sources were not completed in a timely manner.

As required by the Office of Management and Budget (OMB) Circular A-21, the University of California has adopted a quarterly effort reporting process. This method requires that federal award recipients actively certify the level of effort put forward by themselves and their staff (if applicable) on the award on a quarterly basis. To ensure that certifications are completed on a timely basis, the University requires that certifications be completed within 120 days of the end of the quarter. At UCSD, the Electronic Certification of Effort and Reporting Tool (ECERT) is used to certify effort.

Each Primary Investigator (PI), Co-PI, or designate such as a project scientist or a laboratory manager, may certify effort reports for themselves and the staff assigned to them. If the level of effort put forward is different than expected, the
effort percentages are adjusted accordingly by transferring payroll expenses as needed.

As a result of the federal contract and grant activity during the Fiscal Year 2013, INC researchers were required to certify approximately 400 effort reports via the ECERT system. Of these, 36 remained overdue by more than 120 days as of the date of this report. Effort reports certified after 120 days of the end of the quarter increases the level of audit risk to which the particular award and or department is subject.

**Management Corrective Actions:**

INC will ensure timely certification of effort reports by regularly monitoring Financial Link ECERT Aging Queries, actively following-up with responsible researchers regarding overdue reports, and designating alternate ECERT approvers who have first hand knowledge of the research.

**B. Information Systems**

INC had not conducted a formal information systems risk assessment as required by University policy (BFB IS-3). Further, the Integrated Financial Information System (IFIS) approval templates had not been updated to remove a separated employee.

**IS-3 Risk Assessment**

In accordance with UCOP policy IS-3, section III.B, departments or units that handle or manage information assets or electronic resources should conduct formal risk assessments to determine what information resources exist that require protection, and to understand and document potential risks from IT security failures that may cause loss of information confidentiality, integrity, or availability. The purpose of a risk assessment is to help management create appropriate strategies and controls for stewardship of information assets. As business operations, workflow, or technologies change, periodic reviews should be conducted to analyze these changes, to account for new threats and vulnerabilities created by these changes, and to determine the effectiveness of existing controls. Ideally, unit management would work with information systems personnel to complete the IS-3 risk assessment, since management would be knowledgeable as to what information systems assets could be considered high risk.
Per INC information systems administrators, INC had not yet completed an information systems risk assessment as required by IS-3. Because INC conducts human subject research, there is a greater chance that systems or data maintained by the ORU could be considered sensitive, restricted or essential. Completion of an information systems risk assessment would assist ORU management with determining if current information systems security environment is adequate to ensure proper safeguarding of the ORU information systems assets.

Management Corrective Action:

The INC Business Office will work with information systems administrators to complete a risk assessment as required by University policy BFB IS-3.

IFIS Approval Templates

IFIS approval hierarchies are in place to ensure that IFIS transactions are approved by all appropriate personnel prior to being processed and posted to the operating ledger. One of the responsibilities of the Departmental Security Administrator (DSA) is to regularly review the IFIS approval hierarchy to ensure that it is kept current and that all separated employees have been appropriately removed.

We noted that an employee who separated from the ORU over one year ago had not yet been removed from the IFIS approval hierarchies.

Management Corrective Actions:

The separated employee will be removed from the IFIS approval hierarchies. The DSA will review the INC approval hierarchies on a regular basis and remove separated employees in a timely manner.

C. Express Card Administration

Express Card transactions incurred by the Management Service Officer (MSO) were reviewed by a subordinate staff member. Further, two Express Card holders were designated as Express Card Reviewers that were delegated responsibility to review their own transactions.

Every organization unit that uses Express Cards has a designated Express Card Administrator who is responsible for overseeing the Express Card program within their unit. Responsibilities include requesting new Express Cards, deactivating Express Cards accordingly, and reviewing Express Card transactions incurred by
Express Card holders assigned to them. If the unit has more than 10 Express Card holders, the Express Card administrator is required to delegate review responsibilities to an Express Card Reviewer.

In order to ensure proper segregation of duties over Express Card transactions, Express Card Reviewers should not be assigned responsibility for reviewing their own Express Card transactions. In addition, reviewers should not be assigned responsibility for reviewing transactions incurred by a faculty or staff member to whom they report.

Two of the INC Express Card holders were delegated responsibility for reviewing their own Express Card transactions. Further, the Business Officer Manager was delegated responsibilities to review Express Card transactions incurred by the MSO, a staff member to whom the Business Officer Manager directly reports. While it may have been helpful for the MSO to have a procurement card, the practice increased the risk that the Business Office Manager would not perceive she had the requisite authority to question transactions, if the need arose.

The Express Cards roles for the three Express Cards discussed above are as follows:

<table>
<thead>
<tr>
<th>Cardholder</th>
<th>Department Administrator</th>
<th>Reviewer(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCN Sponsored Projects Analyst</td>
<td>Business Office Manager</td>
<td>SCCN Sponsored Projects Analyst</td>
</tr>
<tr>
<td>INC/MPL Fund Manager</td>
<td>Business Office Manager</td>
<td>INC/MPL Fund Manager; Business Office Manager</td>
</tr>
<tr>
<td>MSO</td>
<td>Business Office Manager</td>
<td>Business Office Manager</td>
</tr>
</tbody>
</table>

Appropriate assignment of the Express Card Reviewer role helps ensure segregation of responsibilities within the procurement processes, and increase assurance that purchase transactions are bona fide University expenses that comply with University policy.

**Management Corrective Actions:**

The three Express Cards noted above will be canceled. For any future expenses, INC will ensure that Express Cards holders are not responsible for reviewing their own purchase transactions, and that the Reviewer does not report directly or indirectly to the Express Card holder.
D. Travel Expenditures

One federally funded travel event that was selected for review included a foreign airline connection that was not in strict compliance with the Fly America Act. One additional travel event was not approved in accordance with University travel policy (BFB G-28).

Fly America Act Compliance

The Fly America Act is a federal regulation that requires the use of US carriers when airfare is reimbursed using federal contract and grant funding sources. There are some exceptions that allow for the use of foreign carriers, one of which is when a foreign carrier flight is being operated by a US carrier under a code sharing agreement. In order to qualify for this exception, the travel itinerary must clearly state that the foreign flight is operated by the US carrier. In addition, the exception should be fully documented on the travel expense voucher.

One of the travel events selected for review included roundtrip airfare between San Diego and Seoul, South Korea. Though the flight from San Diego to Los Angeles was with Delta, the flight from Los Angeles to Seoul was with a foreign airline that was not operated by a US carrier. Given that the expenditures were funded by a federal award, this expenditure was not in strict compliance with the Fly America Act. In the event of a federal audit, such expenses could potentially be deemed unallowable.

Management Corrective Actions:

INC will either document the basis for not using a US carrier for this travel event, or transfer the expense to an alternate fund source. INC management will remind researchers about the restrictions set forth by the Fly America Act. For future travel events, INC travel approvers will verify that airfare reimbursed with federal funds is either through a US carrier, or a foreign airline operated by a US carrier.

Travel Event Approval

UC BFB G-28, Section V.A, Approval of Travel Expense Voucher, states that "The Travel Expense Voucher should not be approved by a person who reports directly or indirectly to the traveler." This requirement is in place to ensure that travel expenses are reviewed by an individual that will remain objective and would feel free to question expenses without fear of retaliation.
One of the travel events reviewed included expenses that were incurred by the INC MSO. The travel event voucher was approved by an Administrative Specialist who reports indirectly to the MSO.

**Management Corrective Actions:**

INC will ensure that all travel event expenditures are approved by someone who does not report directly or indirectly to the traveler. Expenditures incurred by the MSO will be approved by the INC Director or Co-Director.

E. **Transaction Sampling**

As of September 30, 2013, a total of 48 INC transactions selected for review by the campus Transaction Sampling system had not been reviewed and reconciled. Of these, 35 were over 60 days old.

INC has enrolled in transaction sampling for operating ledger reconciliation. Transaction sampling is a process managed by UCSD Controller’s Office that selects transactions to be reviewed during the ledger reconciliation period. This process can substantially reduce the workload associated with a 100% operating ledger reconciliation. All transactions above $2,500 are reviewed, while expenditures below the threshold in travel, equipment, supplies and expenses are randomly sampled. Transaction sampling is effective if the entire sample is promptly reviewed, and errors addressed.

Sampling review should be completed within a reasonable amount of time; generally 60 days. A less than complete sample review may put the organization at financial risk for inappropriate expenses and charges to federal fund sources.

**Management Corrective Action:**

INC management will direct staff to review and reconcile all of the transactions sampled by the Transaction Sampling system.
## Institute for Neural Computation
### Audit Results by Business Office Functional Process
### Audit & Management Advisory Services Project #2014-10C

<table>
<thead>
<tr>
<th>Business Office Process</th>
<th>AMAS Audit Review Procedure</th>
<th>Risk &amp; Controls Balance Reasonable (Yes or No)</th>
<th>Audit Conclusion¹</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td>Reviewed five judgmentally selected transactions for reasonableness and compliance with policy.</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Contract &amp; Grant Activity (Pre-Award)</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td>Reviewed three judgmentally selected award proposals for PI compliance with PPM 150-10.</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Contract &amp; Grant Activity (Post Award Admin.)</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td>Reviewed financial reports for same three awards. Searched all funds for unallowable account expenditures.</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Cash and Scrip</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td>Reviewed scrip logs, requests, and traced scrip to Certification to Pay Human Subject forms.</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

¹ Scale: Satisfactory – Improvement Suggested – Improvement Needed – Unsatisfactory
<table>
<thead>
<tr>
<th>Business Office Process</th>
<th>AMAS Audit Review Procedure</th>
<th>Risk &amp; Controls Balance Reasonable (Yes or No)</th>
<th>Audit Conclusion¹</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort Reporting</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td>Reviewed adjusted Payroll Activity Reports; traced to Payroll Expenditure Transfers.</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Scale: Satisfactory – Improvement Suggested – Improvement Needed – Unsatisfactory
Institute for Neural Computation  
Audit Results by Business Office Functional Process  
Audit & Management Advisory Services Project #2014-10C  

<table>
<thead>
<tr>
<th>Business Office Process</th>
<th>AMAS Audit Review Procedure</th>
<th>Risk &amp; Controls Balance Reasonable (Yes or No)</th>
<th>Audit Conclusion¹</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Systems Environment</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td>Improved Needed</td>
<td>INC had not yet completed an information systems risk assessment, as required by BFB IS-3. IFIS approval templates should to be updated to remove a separated employees (&lt;em&gt;Audit Report Finding B&lt;/em&gt;).</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td>Improved Needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Lst Document Review)</td>
<td>√</td>
<td>Improved Needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td>Reviewed Information Systems Questionnaires</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Express Cards</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td>Improved Needed</td>
<td>Transactions incurred on one Express Card were reviewed by a subordinate staff member. Two Express Card holders were delegated responsibility to review their own transactions (&lt;em&gt;Audit Report Finding C&lt;/em&gt;).</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td>Improved Needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Lst Document Review)</td>
<td>√</td>
<td>Improved Needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td>Reviewed a sample of transactions for supporting documentation. Reviewed user and reviewer lists for conflicts.</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

¹ Scale: Satisfactory – Improvement Suggested – Improvement Needed – Unsatisfactory
## Audit Results by Business Office Functional Process

### Audit & Management Advisory Services Project #2014-10C

<table>
<thead>
<tr>
<th>Business Office Process</th>
<th>AMAS Audit Review Procedure</th>
<th>Risk &amp; Controls Balance Reasonable (Yes or No)</th>
<th>Audit Conclusion¹</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel Expenditures</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td>No Improvement Needed</td>
<td>One event was not in strict compliance with the Fly America Act; One event was approved by an individual subordinate to the traveler (Audit Report Finding D).</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reviewed 12 travel events for authorization and compliance with policy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Ledger Review &amp; Financial Reporting</td>
<td>Analytical Review of Financial Data</td>
<td>√</td>
<td>No Improvement Needed</td>
<td>There were 35 transactions sampled by the Transaction sampling system that were over 60 days old and had not yet been reviewed and reconciled (Audit Report Finding E).</td>
</tr>
<tr>
<td></td>
<td>Internal Control Questionnaire/ Separation of Duties Matrix</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Process Walk-through (Ltd Document Review)</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transaction Testing (Sample Basis)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reviewed transaction sampling rates.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Scale: Satisfactory – Improvement Suggested – Improvement Needed – Unsatisfactory