UNIVERSITY OF CALIFORNIA, DAVIS
INTERNAL AUDIT SERVICES

University of California, Davis Health System
UCDHS Telecommunications
Internal Audit Services Project #13-16

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MANAGEMENT SUMMARY

BACKGROUND

IT Facilities provides support for the acquisition, maintenance, and retirement of telecommunication devices, such as smartphones, aircards, pagers, and residential telecommunication services for UCDHS employees. IT Unified Communications (ITUC) provides support for installation, maintenance, and upgrades of all voice related systems (i.e., analog, digital, and VOIP telephone services). IT Facilities and IT Business Operations jointly maintain the Teledat system for tracking and reporting on telecommunication equipment inventory and usage, and for calculating recharges. IT Business Operations maintains records of billing from communication utility providers. A portion of the data is provided to managers and designees of departments charged for these services. Acquisition of new phones, cellular devices, pagers and other telecommunication devices are centralized through a formal IT service request process. Responsibility for device utilization review and device-user updates has been decentralized to respective user departments.

Major device driven telecommunication services include cellular services and pagers with an average annual expenditure of approximately $1.8 million at UCDHS. The following chart reflects the costs of cellular services and pagers for FY 2010 through FY 2013.

UCDHS Key Telecom Vendors Payment Trend
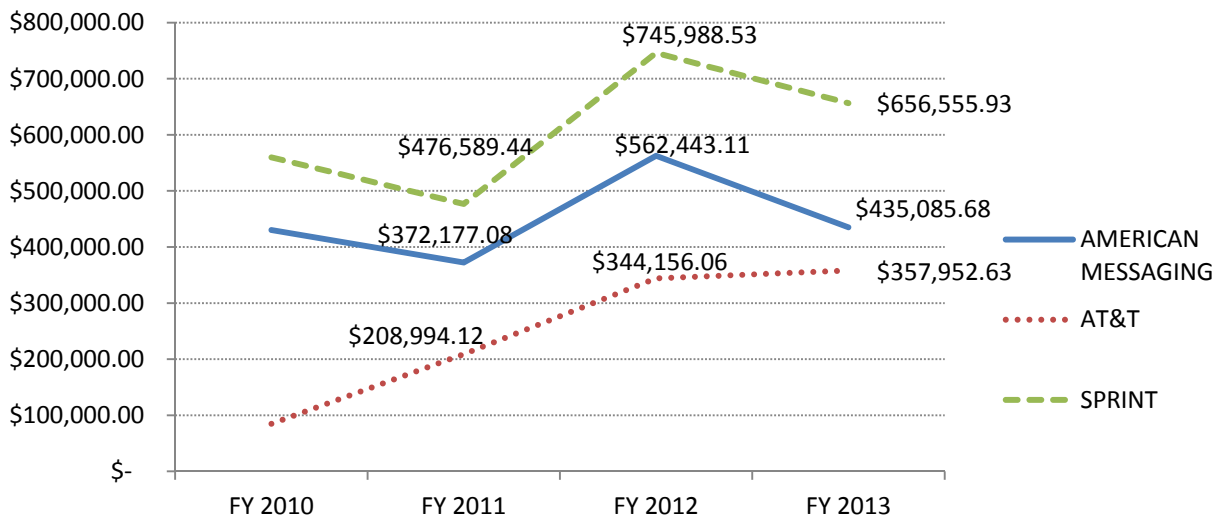
Telecommunication records are primarily maintained in the Teledat system. This system is designed to provide telecommunication management functions, such as call accounting, work order processing, telecommunication equipment installation tracking, service activity, and vendor billing. The system also provides reporting and query functions to support accounting and billing requirements. Teledat has been in operation for over 20 years.

PURPOSE AND SCOPE

UCDHS Telecommunications was audited as part of our planned reviews for fiscal year 2013. The purpose of the audit was to review procedures for providing telecommunication services and for monitoring utilization and expenses to ensure proper and efficient use of resources. Our review covered telecommunication activities from January 2013 through August 2013.

To conduct our review, we interviewed IT Unified Communications, IT Facilities, and IT Business Operations personnel to understand the authorization, device acquisition, record maintenance and disposal processes. We performed analytical procedures to test the accuracy and completeness of telephone, cellular device, residential telecommunication service and pager information as reported. We used a risk based approach to focus our review on specific key processes, such as authorization, record maintenance, utilization and disposal. Our testing included determining whether:
- Residential telecommunication services and cellular devices are paid for designated active employees.
- Voice services, residential telecommunication services, cellular devices, and pagers are accurately recharged back to the appropriate departments.
- Residential telecommunication services and cellular services were purchased for business purposes.
- Cellular devices are purchased at service levels consistent with actual business usage.

CONCLUSION

We concluded that management oversight of telecommunication services was insufficient to ensure the efficient and effective use of the telecommunication equipment primarily due to limitations inherent in the Teledat system. We determined that an accurate inventory of residential telecommunication services, cellular devices, and pagers was not maintained and that the reporting process established to facilitate departmental review of telecommunication expenses is outdated, which resulted in expenditures for services that were not being used and expenditures for services to separated employees. We also determined that telecommunication services were not consistently recharged to departments at reasonable rates and that justification for providing duplicate telecommunication equipment for such users was not documented. Finally, authorization records for residential telecommunication services were not maintained.

Our observations and recommendations are presented within the body of this report along with corresponding corrective actions management has agreed to implement.

OBSERVATIONS, RECOMMENDATIONS, AND MANAGEMENT CORRECTIVE ACTIONS

Our review of the procedures for providing telecommunication services and for monitoring utilization of expenses to ensure proper and efficient use of resources disclosed the following summary conditions (described in more detail in the pages following):

- Records in key telecommunication databases and data models were not properly maintained to facilitate effective management review.
- Residential telecommunication services, cellular devices, and pagers were not terminated on a timely basis with vendors for employees who separated from UCDHS.
- Departments purchased cellular devices at inappropriate service levels that did not reflect the average business-related usage. Departments did not have enough information to assess the usage level of cellular devices. Idle, underutilized, and over-utilized cellular devices were not identified and controlled. Sound cost-saving measures and controls for cellular devices were not implemented.
- Residential telecommunication, cellular devices, and pagers were not properly recharged to departments to reflect costs incurred for service activities.
- Departments granted employees multiple smartphones and pagers without sufficient documentation supporting the rationale for use of multiple devices
- Approval records and vital usage agreements for residential telecommunications were not available consistently from department to department.

Our review also identified the following reasons for the conditions observed:

- The Teledat system is inadequate to properly allow key data to be shared appropriately.
- Key data fields (employee name, employee ID number) in Teledat cannot be normalized to facilitate cross-database comparison against payroll records and invoice records for review, and the records do not contain sufficient detail for proper identification to ensure user accountability.
- There is no effective centralized review and reconciliation process to ensure Teledat records are updated as a result of department change requests. Departments are not consistently following a review process for cellular device invoices and usage records did not exist to identify and investigate idle, underutilized, and over-utilized cellular devices.
- Recharge processing procedures for residential telecommunication services (internet access and voice) were not clearly defined and communicated.
- Documentation of residential telecommunication service requests was not maintained to evidence departmental approval and signed usage agreements.

UCOP Policy G-46, *Guidelines for Purchase and Use of Cellular Phones and other Portable Electronic Resources*, establishes that an employee who is to be provided electronic communications equipment or services must, prior to receipt of such resources, sign a usage agreement acknowledging that primary use of the resources will be for official University business and that any personal use of the resources will be incidental in nature. This policy also establishes that cellular phone contracts should be selected to reflect the level of expected business-related use. Departments should annually review and adjust service contracts to reflect the average business-related use and to maximize cost savings. The University may purchase personal computers and related software, printers, telephone lines, fax machines, and internet and e-mail services for employees who telecommute or frequently work from home. The department head will approve such purchases in accordance with campus guidelines for employees who work from home.

UCD PPM 340-25, *Recharge Activities*, states that the responsible unit must manage the activity to recover the full direct costs of providing the goods and services through an allowable, reasonable, and identifiable rate to ensure that the activity operates on a break-even basis.

UCD Administrative Responsibilities Handbook states that a system of internal controls must be established and maintained to ensure efficient and effective operations; safeguarding resources against waste, loss and misuse, which includes security of assets and records. The Handbook also establishes that all financial systems should meet the users' needs; all interfaces affecting any financial system must contain controls to ensure the data is synchronized and reconciled. Recorded assets must match actual existing assets and mechanism must be in place to detect discrepancies and ensure corrective actions are taken. Records must contain sufficient detail for proper identification and classification and be readily retrievable for inquiry or reporting. Appropriate controls must be established to ensure equipment is associated with current authorized user employees and such associations are accurately captured and maintained.

1. **UCDHS telecommunication records**

   The process for maintaining the records for UCDHS telecommunication services could be improved.

   We determined that departments across UCDHS were recharged $132,759 for 4,917 phone lines (48% of 10,335 total reported phone line population) with no activity reflected in the Teledat phone records during January 2013. We were unable to establish the true number of phone lines that should remain active and be recharged based on the current Teledat records because inter-department and voice-over-internet-protocol (VOIP) phone calls are not tracked and reported.

   We surveyed two departments and determined that one department was recharged for seven inactive phone lines at a recharge cost of $189. In addition, 11 phone lines were identified with incorrect users in the Teledat records, and one phone line was disconnected but the department was still getting recharged. The other department identified seven phones lines and nine pagers that are no longer active, and the department is in the process of canceling these accounts.

2. **Termination of UCDHS telecommunication services**

   The process for terminating telecommunication services with vendors could be improved.

   We determined that the UCDHS paid $58 for residential internet monthly services through March 2013 for an employee who was separated in December 2012. The department's request to discontinue service was improperly submitted to IT. The department was not aware of the continued monthly charges because they were not properly recharged for the services.

   We identified 14 pagers with a monthly cost of $944 that were identified as lost on the January 2013 vendor invoice. Subsequently, UCDHS contracted with a new pager vendor. As a result, we reviewed the August 2013 invoice for the new vendor and noted multiple charges of

$42.33, amounting to $634.95, on this invoice for "equipment not returned". The vendor charged UCDHS for 15 missing pagers; whereas only 6 pagers were listed as missing on the invoice. We also identified 189 pagers on the August 2013 invoice that were still listed with employees who already separated from UCDHS. The total monthly cost of these pagers was approximately $1,200, reflecting an average charge of about $6 per month. UCDHS paid for 4,123 pagers in August 2013.

We also identified 29 cellphones with a monthly cost of $1,947 that were assigned to employees identified on vendor invoices who were also separated from UCDHS, based on payroll records. ITUC had paid $72 per month since August 2011 for one employee because the employee did not establish a new personal user account and the financial responsibility automatically reverted back to the UCDHS. ITUC had submitted a release of financial responsibility to the cellphone vendor and removed the cellphone record in Teledat. However, the account transfer was never completed and ITUC did not follow up to ensure the billing was discontinued.

Finally, we noted that ITUC did not maintain an updated list of residential phone and residential internet users. Out of 40 records provided, 14 records should have been removed or updated because the records did not match the invoice information or the assigned employee had separated from the UCDHS.

3. **Idle, underutilized, over-utilized cellular devices.**

   The process for monitoring cellular usage and managing cellular contracts could be improved.

   We identified 336 cellular accounts (smartphones and aircards) that were idle with monthly invoice cost of $14,702.97 in March 2013. Smartphones made up 57% (167 accounts) of the idle equipment cost. Assuming this was representative of an average month, the projected annualized cost for idle cellular equipment would be $124,000.

   Overall, UCDHS paid for 766 cellular accounts with 32 different plan types in January 2013. More than 316,000 voice minutes associated with these accounts were unused at a conservative projected cost of about $21,000 per month, or $252,000 per year. Three cellular accounts exceeded the voice plan maximum, resulting in additional voice charges of $363 for the month reviewed. In addition, 13 out of the 782 cellular data accounts exceeded data plan maximums in January 2013, resulting in additional data charges of $59, and 118 out of the 670 messaging accounts exceeded the messaging plan maximum in January 2013, resulting in additional messaging charges totaling $1,126.

4. Recharge costs for UCDHS telecommunication services

The process for recharging UCDHS telecommunication services could be improved.

We determined that residential telecommunication accounts from vendor invoices were not reconciled to Teledat records in January 2013. We identified 15 home phone accounts with a monthly invoice cost of $478 (minimum of $31 per account) that were not recharged to the appropriate departments in January 2013. We also identified 16 home internet accounts with a total monthly invoice cost of $1,478 (minimum of $53 per account) that were not recharged to the appropriate departments. In addition, eight of the phone accounts and six of the home internet accounts were not reflected in the Teledat records.

We also determined that 247 cellular devices were not listed in Teledat and recharged to the appropriate departments and that 21 cellular devices were not recharged at the appropriate rate in January 2013, resulting in a total cost of about $7,000 that was not properly recharged. We identified 330 cellular devices with a total monthly recurring cost of about $10,000 that did not have a unique identifying employee name on the vendor invoice.

In January 2013, we determined that 453 pagers were not listed in Teledat and recharged to respective departments, and that 201 pagers were not recharged at reasonable rate, resulting in a total cost of about $8,000 that was not properly recharged. Under the new pager vendor, departments were recharged for 110 pagers that were already returned back to the vendor in the amount of $581.90 in August 2013.

5. Duplicate devices for same employees

Documentation for duplicate device users could be improved.

We identified 112 cellular devices with a total monthly recurring cost of $4,798.41 (projected at almost $60,000 per year) that had duplicate employee names listed on the vendor invoice in January 2013. We also identified 26 pagers with a total monthly cost of about $190 that had duplicate employee names listed on the January vendor invoice. Justification reflecting a legitimate business purpose for assigning multiple telecommunication devices to the same individual was not readily available.

6. Approval for residential telecommunication services

The recordkeeping process for residential telecommunication service approvals could be improved.

We were unable to obtain proof of departmental approval and record of usage agreements for residential telecommunication services provided to four employees out of 10 selected test samples. Adverse legal ramifications may result if UCDHS is unable to provide a proof of authorization and usage agreement in case of future personnel actions partly based on telecommunication records for human resource purposes.

Recommendations

Improving current practices in the areas of record normalization, timely updates, reconciliation, user identification and reporting will be challenging for IT Facilities and IT Business Operations due to inherent limitations in the Teledat system. Therefore, we recommend that IT Facilities, IT Business Operations, and IT Unified Communications assess the feasibility of replacing the current telecommunication system to better track, update, and record telecommunication equipment and related activities and to facilitate reporting for effective management, monitoring, recharge and usage for telecommunication equipment. In the interim, they should implement the following measures to improve management oversight of telecommunication services and ensure the efficient and effective use of the telecommunication equipment in accordance with University policy:

- Develop processes to ensure data is synchronized, updated and reconciled for cellular devices and residential telecommunication services.
- Improve review and reporting process for cellular devices and residential telecommunication services, to ensure safeguarding of cellular devices against waste, loss and misuse.
- Obtain documentation for cellular services to establish what the primary use of the resource will be for conducting University business.
- Improve the service request process to ensure that telecommunication services are terminated on a timely basis.
- Improve recharge processes for residential telecommunication services to ensure respective departments are properly recharged through an allowable, reasonable, identifiable rate on a break-even basis.
- Develop procedures to ensure pagers are properly accounted for, used by active employees, and appropriately recharged.

Management Corrective Actions

1. UCDHS telecommunication records

   a) IT will assess the technical, administrative, and budget requirements of a system to replace Teledat and provide the assessment to the UCDHS CIO.

   Completion Date: September 26, 2014

   b) IT will communicate a reminder to all UCDHS leadership of the UCOP Policy G-46, "Guidelines for Purchase and Use of Cellular Phones and other Portable Electronic Resources" and UCD Administrative Responsibilities Handbook policies and expectations regarding management review specific to telecommunication devices.

   Completion Date: February 28, 2014

2. **Termination of UCDHS telecommunication services**

   a) IT will resume the recharge process for residential telecommunication services to ensure respective departments are properly recharged through an allowable, reasonable, identifiable rate on a break-even basis.

   Completion Date: October 1, 2014

   b) IT will communicate a reminder to all UCDHS leadership of the UCOP Policy G-46, "Guidelines for Purchase and Use of Cellular Phones and other Portable Electronic Resources" and UCD Administrative Responsibilities Handbook policies and expectations regarding management review specific to telecommunication devices.

   Completion Date: February 28, 2014

   c) IT will discontinue the practice of porting of cellular devices to separated employees' personal accounts.

   Completion Date: April 4, 2014

   d) IT will implement a process to ensure data is synchronized, updated and reconciled, including approval documentation for new requests of residential telecommunication services.

   Completion Date: April 4, 2014

   e) IT will continue to improve the process to manage the inventory of lost and unreturned pagers and paging charges. IT now receives a copy of the monthly invoices from the vendor and reviews them for accuracy. For pagers that need to be disconnected/inactivated, IT will further improve pager management as follows:
      1) Establish an agreement between UCDHS and USA Mobility to extend the timeframe for a charge to occur for pagers that are disconnected. The timeframe will change from the current period of no longer than 30 days to 60 days.
      2) IT will adjust when a pager is placed as inactive with USA Mobility to occur after the pager has been turned into IT. The department will continue to be charged for this pager regardless of the request to disconnect until they have returned the pager to IT.

   Completion Date: March 28, 2014

3. **Idle, underutilized, over-utilized cellular devices**

   IT has created a new report for management review that includes usage details for mobile phones and aircards, excluding pagers and other telecom equipment; inventory; and devices that have been idle for 3 or more months. A report will be created to facilitate management review of pager devices. The mobile phone and aircard reports are currently delivered to select pilot departments. IT will complete the pilot phase and deliver these new reports to the remaining relevant UCDHS management.

Completion Date: October 25, 2014

4. Recharge costs for UCDHS telecommunication services

a) IT will implement a process to ensure data is synchronized, updated and reconciled, including approval documentation, for new requests of residential telecommunication services.

Completion Date: April 4, 2014

b) IT will review, and modify as necessary, the process to ensure cellular devices are properly inventoried and listed in Teledat and are recharged appropriately.

Completion Date: September 26, 2014

5. Duplicate devices for same employees

IT will communicate a reminder to all UCDHS leadership of the UCOP Policy G-46, "Guidelines for Purchase and Use of Cellular Phones and other Portable Electronic Resources" and UCD Administrative Responsibilities Handbook policies and expectations regarding management review specific to telecommunication devices.

Completion Date: February 28, 2014

6. Approval for residential telecommunication services

IT will implement a process to ensure data is synchronized, updated and reconciled, including approval documentation, for new requests of residential telecommunication services.

Completion Date: April 4, 2014

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