



**Johnson County Auditor**  
Johnson County, Kansas  
**PERFORMANCE AUDIT**

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**December 2005**

**Disposal of Surplus Computers**

*"The County appropriately suspends sales of surplus computers."*



# DISPOSAL OF SURPLUS COMPUTERS

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## **RESULTS AND RECOMMENDATIONS**

### **The County Needs a Unified Approach to Surplus Computer Equipment Disposal**

Procedures for preparing computers for disposal varied among County departments and were not sufficient to ensure County information was removed before disposal. Our review of surplus computers in early 2004 and again this year revealed that some of the computers designated for surplus sale have hard drives that contain recoverable County data. Upon notification of this problem in 2004, the Office of Financial Management (OFM) immediately suspended sales of surplus computers until a procedure for cleansing computers could be developed. Over a year later, the policy has not been completed. Surplus assets, including over 400 computers, many with recoverable County data, have accumulated in the warehouse. While the decision to suspend sales of the computers was prudent, the surplus policy and disposal procedures need to be developed expeditiously to ensure County departments properly prepare computers for disposal, reduce the inventory of computers not ready for disposal, and maximize the County's return on these machines.

#### **How is surplus property handled?**

K.S.A. 19-211 establishes requirements for the disposal of surplus public assets. The statute requires that assets be sold at public auction with the unanimous approval of the Board of County Commissioners. In 2004, the legislature amended the statute to allow counties to adopt alternative procedures. Since late in 2004, the County Manager (CM), Information Technical Services (ITS), the Legal Department (LEG) and OFM have been working on devising a comprehensive surplus disposal policy.

#### **How Audit Services did the audit**

The objectives of the audit were to:

- Review county procedures for planning, acquisition and disposal of computer equipment
- Determine if departments are following consistent procedures
- For surplus and unused computers determine whether:
  - Surplus computers are adequately controlled and maintained in secure locations
  - Any County data remained on computers when they were offered for sale or disposal

To accomplish our objectives we reviewed:

- The surplus disposal procedures from each County department and the inventory of the computers at each department
- A listing of the surplus computers that were currently in storage
- A sample of the computers in storage to determine whether the computers had readable data on them

## **Test to determine if there was retrievable data on computers designated for surplus sales**

The audit team selected a limited number of computers that had been reported as excess, turned in, and stored in the warehouse to await sale. Our testing methodology included:

- Turning the computer on to see if it contained an operating system. (Did it boot up?)
- If it did, we attempted to read the drive using normal Windows operations.
- We then removed the hard drive, where one was in the computer, and installed it as a second drive in a working computer.
- We again tried using the Windows commands to read the drive.
- If that was unsuccessful, we used an inspection program that read what was on the disk whether or not there appeared to be files. (Had the drive been reformatted without deleting the data?)

## **Disposal methods were not consistent among County departments**

Although County department staffs were generally consistent in managing computer acquisitions, disposal practices were not consistent and left the County at risk for inappropriately disclosing County information. Our review of the department procedures disclosed computers that are declared surplus may or may not be properly cleaned of County data before disposal. Three of 32 departments surveyed did not ensure computer hard drives were cleaned or destroyed before sale. Many of the remaining departments attempted to clean the hard drives using a variety of techniques such as reformatting hard drives, using software to rewrite the hard drives, and various forms of decommissioning the hard drives (removal, drilling holes etc.). According to County policy, County information should be stored on County servers and not on employee computers.

Departments did not know how to clean hard drives

## **Audit tests disclosed data on computers designated for surplus sales**

Audit Services initiated a risk assessment in early 2004 to determine whether there was sufficient material to include a review of surplus computers on the annual audit plan. The risk assessment involved testing a small number of computers that had been approved for sale. This assessment showed that County data remained on computers approved for sale. We communicated the initial results to OFM-Purchasing and they took immediate action to discontinue the sales of surplus computers until a plan for safe and efficient data removal could be determined. Based on our initial survey, Audit Services included an audit on the Audit Plan for 2005 that was approved by the Board of County Commissioners.

County suspends sales of surplus computers

Our review of the Surplus Equipment Disposal policy and interviews with Purchasing and ITS staff showed the following procedures in place prior to 2004:

- Each department was responsible for preparing surplus computers for disposal
- When the computer was ready for disposal the department notified Purchasing

- Purchasing picked up the computers and ensured compliance with the provisions of K.S.A 19-211
- An auction firm then picked up the computers and sold them at public action

As a follow-up to our risk assessment, we selected 12 computers that were in storage and performed the same test for data. Four of the 12 computers had data on them including social security numbers and locations visited by a mental health employee. We could not determine if there was data on 4 others because we could not access the hard drive using the methods available to us. In 4 of the 12 computers tested, we saw evidence that the data had been effectively removed or erased.

Sensitive data found on surplus hard drives

In 2004, OFM decided that sales of surplus computers would not resume until the County had a policy for cleaning hard drives and for disposing of computers. Based on the County's current policy of replacing computers every 3 years and the County's current inventory of approximately 5,200<sup>1</sup> computers, the inventory of surplus computers may grow at the rate of over 1,700 computers annually.

### **Current developments in County planning for disposal of surplus computers**

The Director of ITS is providing guidance and software for cleaning hard drives prior to disposal. Under his plan, the departments can access the ITS website, download the software and run it on computers scheduled for surplus. This software package meets the standards of the U. S. Department of Defense which is the benchmark for security of hard drives. Department staff would be required to complete a form certifying the hard drives were cleaned properly and retain the form for 1 year. Implementation of this plan would ensure consistency among departments in preparing computers for surplus.

Guidance planned for cleaning hard drives

The 2004 change in Kansas law allows the County to develop a surplus policy using alternatives to auctions for disposal activity. Over 1 year later, the County has not completed their efforts to develop policy. Alternatives for disposing surplus computers are being considered that include more programs than auction sales. There is a recognized sense of urgency to finalize a plan and policy because the number of computers in storage has surpassed 400 and will continue to grow. Most all of the agencies surveyed indicated a 3-5 year cycle for replacing computers which will provide a steady stream of surplus computers.

### **Conclusion**

Proper decisions were made to protect the County from disclosing information on hard drives. The increasing number of surplus computers in storage poses problems with disposition. All of these computers will have to be cleaned or the hard drives will have to be removed or destroyed prior to sale to ensure County data is not released. In addition, the remaining value in the computers is reducing with the passage of time. Although County staff recognize the need for a consistent procedure and plan for sanitizing and disposing of surplus computers, over a year has

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<sup>1</sup> Unaudited total reported to us by the departments

elapsed since the first notification of the problem. Immediate and effective action is needed. Purging data from the existing surplus computers is not contingent upon the County developing a disposal policy.

## **Recommendations**

We recommend the County Manager, Director, ITS and Director OFM:

- 1.1 Establish a target date for presenting a revised asset disposal policy to the BOCC for review.
- 1.2 Develop a procedure for disposing of surplus computers, including:
  - A county-wide standard for data cleansing, and
  - Maximizing the return on the surplus equipment.

## **Management Comments**

***Surplus computer data and disposal:*** We concur with the concerns of the Internal Auditor. Upon notification of the potential problem of County data being left on surplus computers, OFM Purchasing suspended the sale or disposal of computer units pending the release of a standardized procedure from ITS. ITS has drafted a procedure that will establish and maintain standardized methods for cleansing of data from computer hard drives. ITS has indicated that the final procedure should be distributed by mid-November.

***Surplus property disposal policy development:*** The development of a surplus property disposal policy and procedure is a separate, but related issue. At no time was the purging of data or the subsequent disposal or sale of surplus computers waiting on a new County surplus property disposal policy.

*In 2004, the Legislature made changes to KSA 19-211 concerning the disposition of surplus county property. The change allowed counties to adopt a resolution establishing alternative methods for disposal of property. Counties were not required to adopt a resolution. If a resolution was not adopted, counties would be subject to the existing provisions of the statute. Pursuant to this change, the Kansas Association of Counties (KAC) began work on a model policy for counties to use. During the spring of 2005, OFM drafted a surplus disposal policy and associated procedures based on the model KAC policy. OFM felt that the new surplus policy and procedures should be a comprehensive solution for the disposal of all surplus property (computers as well as other surplus property). It was our desire to incorporate language regarding data cleansing into either the surplus disposal policy or procedure. Rather than going to the BOCC multiple times with surplus disposal policy issues, we felt it was prudent to wait and take a comprehensive solution that included data cleansing. The OFM surplus disposal policy and procedure has remained in draft status pending development of a County-wide procedure from ITS for cleansing data from computers.*

*The OFM draft surplus disposal policy and procedures was sent to Chief Counsel for review in August of 2005. Chief Counsel has since decided to draft a new surplus disposal policy from*

*scratch. He has indicated that this new draft is anticipated to be available around the first week of November.*

***Conclusion:*** *Once the new Surplus Policy and Procedures and the ITS Asset Disposal Procedure are implemented County-wide, we believe the Internal Auditor's concerns will have been fully addressed. There will be a single County-wide standard for data cleansing that will assure that surplus computer units are free of any recoverable data prior to sale or other disposal method. Chief Counsel has indicated that the policy he is drafting will allow the County to dispose of the surplus units in the manner that will assure maximum return and flexibility to Johnson County.*

*It is anticipated that these measures will be fully approved, disseminated to departments, and implemented by the end of 2005. The 400+ computer units already declared as surplus and stored in the warehouse will be cleansed utilizing the ITS approved procedure when it is disseminated and will then be made ready for sale or disposal.*

## **OBJECTIVES, SCOPE AND METHODOLOGY**

### **Objectives**

1. Review county procedures for planning, acquisition and disposal of computer equipment
2. Determine if departments are following consistent policies
3. For surplus and unused computers determine whether:
  - Surplus computers are adequately controlled and maintained in secure locations
  - Any County data remains on computers when they are sold or disposed of.

### **Background**

In 2004, County audit staff made a brief, informal review of a small sample of surplus computers. We found that surplus equipment had been sold prior to Commission authorization and that some of the computers we examined retained County data although it was ready for sale. We also determined that data removal is a departmental responsibility and there was no procedure for ensuring that the data was removed.

Subsequently, Audit Services became aware that there were stockpiles of older, unused computers in various storage locations around the County. Significant vulnerability to the County existed with the surplus computers. With severe penalties under the Health Insurance Portability and Accountability Act of 1996, any identifiable medical data could result in prosecutions of individuals in the county. The audit focused on procedures and practices for ensuring the computers do not have retrievable data on the computers.

### **Scope and Methodology**

To accomplish the audit objectives the auditors:

- Obtained and analyzed departmental policies for computer surplus and disposal
- Obtained and analyzed departmental computer inventories
- Selected a sample of computers in surplus storage
- Tested the sample computers to determine whether they retained recoverable data
- Procedure:
  - Attempted to “boot up” the computer
  - If that failed, removed the hard drive and installed it in a working computer as a secondary drive
  - Used either the available operating system or a commercial data recovery product to determine if the drive retained data in spite of any attempts to “clean” the disk