



# **2nd Follow-Up Software Licensing Audit**

Issued by the  
Internal Audit Office  
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City of El Paso, Texas  
Internal Audit Office  
2<sup>nd</sup> Follow-Up Software Licensing Audit

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**EXECUTIVE SUMMARY**

The Internal Audit Office conducted a follow-up audit of the *Software Licensing Audit* dated January 31, 2006. The original audit report contained one finding with agreed upon recommendations and management action plans.

Finding No.	Description of Original Finding	Status
1	<p>The City of El Paso has a documented Software Licensing Policy that is broad in nature and sets forth the policy, and includes a disciplinary action component. However, the current City Software Licensing Policy does not have a monitoring component as part of the policy. Therefore monitoring procedures are lacking within the Information Technology Department's Software Licensing Policy. This lack of authority makes it difficult to enforce the Software Licensing Policy on an organization wide basis. As a result of a lack of a monitoring component within the Software Licensing Policy the following was noted:</p> <ul style="list-style-type: none"><li>• Formal software licensing policy.</li><li>• Limited periodic reviews of contracts or software license agreements are conducted to ensure compliance.</li><li>• Limited training program available for city personnel on software licensing compliance.</li><li>• Standard software purchasing procedures exists, but variations exist due to software needs.</li><li>• Limited periodic software audits.</li><li>• Varied inventory of software installed on City owned computers.</li><li>• No policy in place regarding the downloading of Internet based software.</li></ul>	Implemented

For a detailed explanation of the finding and the current observations please refer to the finding contained in the body of this Audit Report.

Based on our review, the finding has been addressed. No additional follow-up audit will be necessary since corrective actions addressing the finding and associated recommendations have been implemented.

### ***BACKGROUND***

The Institute of Internal Auditor's *International Standards for the Professional Practice of Internal Auditing, Standard 2500.A.1*, requires a post audit follow-up on all audit recommendations made to ascertain that appropriate action is taken on reported audit findings or that senior management has accepted the risk of not taking action.

The original *Software Licensing Audit Report* dated January 31, 2006 identified a finding with several underlying issues which relate to the monitoring component of the City Software Licensing Policy. The issues concerned the monitoring of software installed on City-owned computers; documentation and management of software licenses to ensure proper maintenance and disposition; policies and procedures to govern the acquisition, downloading, distribution, and use of licensed software; and training of City personnel on software licensing compliance.

The development of software by individuals, companies, and governments is usually an effort that involves time, financial investment, and the creative ideas and talents of development engineers, writers, and designers. Copyright protection serves to encourage, support, and reward the creative work of software inventors and owners. It secures the right of software inventors and owners to receive compensation and recognition for their intellectual property. When software is purchased, the buyer does not become the owner of the copyright. Instead, the buyer purchases the "right" to use the software under certain restrictions imposed by the license accompanying it. It is imperative that the City ensure that each and every copy of a software program (such as Microsoft Windows or Office) be accounted for and properly licensed.

We conducted a follow-up audit, *Software Licensing Follow-Up Audit Report* dated April 18, 2007, which identified that corrective actions were *in-progress*.

### ***SCOPE***

The objective of this 2<sup>nd</sup> follow-up audit was to ascertain if management implemented corrective actions to address the items identified in the *Software Licensing Audit Report* dated January 31, 2006.

The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* issued by the Institute of Internal Auditors.

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***ORIGINAL FINDINGS, ORIGINAL RECOMMENDATIONS, MANAGEMENT’S  
RESPONSE TO ORIGINAL FINDINGS, CURRENT OBSERVATION, AND  
STATUS***

Based on the results of follow-up test work, each original finding recommendation will be designated with one of the following four status categories:

<i>Implemented</i>	The finding has been addressed by implementing the original corrective action or an alternative corrective action.
<i>In Progress</i>	The corrective action has been initiated, but is not complete.
<i>Not Applicable</i>	Recommendation is no longer applicable due to changes in procedures or changes in technology.
<i>Not Implemented</i>	Recommendation was ignored, there were changes in staffing levels, or management has decided to assume the risk.

**Original Finding 1**

The City of El Paso has a documented Software Licensing Policy that is broad in nature and sets forth the policy, and includes a disciplinary action component. However, the current City Software Licensing Policy does not have a monitoring component as part of the policy. Therefore monitoring procedures are lacking within the Information Technology Department’s Software Licensing Policy. This lack of authority makes it difficult to enforce the Software Licensing Policy on an organization wide basis. As a result of a lack of a monitoring component within the Software Licensing Policy the following was noted:

Software Licensing Objective	Status
1. Is there a formal software licensing policy?	Yes.
2. Periodic reviews of contracts or software license agreements are conducted to ensure compliance?	Limited reviews by IT divisions.
3. Is a training program available for city personnel on software licensing compliance?	Limited.
4. Standard software purchasing procedures exists?	Procurement policy and procedures exist. Variations exist due to software needs.
5. Does Information Technology conduct periodic software audits?	Limited.
6. Is there an inventory of software installed on City owned computers?	Varies by IT division.
7. Is there a policy in place regarding the downloading of Internet based software?	None.

**Original Recommendation**

The Information Technology (IT) Department should establish a monitoring requirement as part of the existing Software Licensing Policy. In addition to the monitoring component, we recommend the IT Department bring together its three divisions in a process improvement initiative to help create a set of Standardized Operating Procedures to enforce the monitoring requirement. These procedures should be disseminated to City of El Paso management and staff.

**Original Management's Response**

We are making preparations to fully implement the Computer Associates (CA) Asset management modules. This is a set of applications that the City already owns and which are being used in a limited capacity to monitor what applications are installed on City owned information processing equipment. Utilizing CA Argis in conjunction with other CA modules will allow for documentation and management of software at the user level and throughout the city. Information vital to license management will be available on demand to provide for monitoring, inspection, and reporting of license usage. CA Argis will also allow IT asset tracking from the time of acquisition and throughout the products life cycle insuring proper maintenance and disposition of licensed assets.

To provide IT greater control over what software is installed on city PC's, IT will reacquire and implement the Websense application to provide another layer of security. Websense is proven software that will prevent users from downloading unauthorized applications from the Web either intentionally or as part of authorized downloads such as email.

We will develop standardized policies and procedures governing the distribution, access, and use of licensed assets, which are critical to a comprehensive license management as well as an effective security program. These standardized policies and procedures will also clearly define the enforcement process for violation of rules and restrictions for licensed and classified software assets. Finally, the policy will mandate a comprehensive and ongoing training and information dissemination process to insure both users and management are aware of all requirements and restrictions pertaining to licensed and classified software resources.

**Original Responsible Party**

Walter Townsend, Special Projects Coordinator

**Original Implementation Date**

Approved Licenses Management Policy – June 9, 2006  
Complete Documentation

**First Follow-Up Observation**

Within the last year, the Information Technology (IT) Department has experienced a change in management, as well as, turnover of other key IT personnel. One of which, was the responsible person for implementing the recommendations and management action plans agreed upon in the original audit report. The IT Department has encountered a software contract issue with its vendor, Contract Associates. The software package was planned to take a key role in the implementation of the management action plans. The contract issues with the software package and the change of key IT personnel have been the causes for the recommendations not to be addressed as of the due date.

The finding with its underlying issues was not fully implemented as of the target implementation date stated in the original audit report. The Information Technology Department is in the process of implementing corrective actions that will address the previously identified finding and underlying issues.

The management action items have a new target implementation date of August 1, 2007.

**First Follow-Up Status**

In Progress

**Current Follow-Up Observation**

Within the last few months, the Information Technology (IT) Department has implemented adequate corrective actions that address the finding and associated issues.

The department has implemented the use of System Management Server (SMS) and Microsoft Operation Manager (MOS) software systems that allow the department to remotely manage desktop and server systems while also being able to inventory the software that is installed on each desktop or server. This information will be used to determine the number of software licenses used by the City in order to be able to perform the license true-up process when renewals are due.

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The department has also completed an inventory of City-owned equipment (which includes desktops, laptops, printers, etc.). The inventory listing will allow an additional method of ensuring the accuracy of the computer systems identified by the SMS system to be used during the license renewal true-up process.

The IT Department configures computers to not allow the installation of software by their users unless they have *administrator* rights. Users without *administrator* rights must contact the department to request and justify the installation of a particular piece of software.

New employees are required to sign a form indicating their understanding of the policies regarding the downloading, use, and acquisition of computer software and all employees are reminded every time a computer is booted up with a “splash” screen at start-up stating the policies.

**Current Follow-Up Status**

Implemented

***INHERENT LIMITATIONS***

Because of the inherent limitations of internal controls, errors or irregularities may occur and not be detected. Also, projections of any evaluation of the internal control structure to future periods are subject to the risk that procedures may become inadequate due to changes in conditions, or that the degree of compliance with the procedures may deteriorate.

***CONCLUSION***

Based on the results of this 2<sup>nd</sup> follow-up audit, the original finding has been addressed by Information Technology Department Management. We wish to thank the Information Technology Department management and staff for their assistance and numerous courtesies extended during the completion of this follow-up audit.

*Signature on file*

Edmundo S. Calderón, CIA, CGAP, MBA  
Chief Internal Auditor

*Signature on file*

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Lead Auditor

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