

The  
Software  
Alliance

**BSA**

**Government  
Guide for  
Software  
Asset  
Management**

# Introduction

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***In today's digital era, software is indispensable. It drives our computers and allows us to collect, organize, access, analyze, and share information on a scale and with efficiency not imagined 20 years ago.***

*Software, like other valuable assets, must be managed throughout its lifecycle to achieve its potential benefit. An effective management plan must address asset acquisition, use, and disposal. In addition, the process must occur in an environment receptive to management actions and committed to success.*

*Governments, as information organizations, are especially dependent on software. Since governments make and implement laws on behalf of those they govern, they have a clear responsibility to demonstrate, through their policies and practices, the importance of adhering to laws governing the use of software. Legitimate software use by governments will encourage the private sector to follow suit, thereby leading to growth of the domestic software industry which creates jobs and generates revenue.*

## 1.1

### A STEP-BY-STEP GUIDE

This manual provides step-by-step guidance for managing the installed software base of governmental organizations. For senior government officials, it explains why software asset management (also known as SAM) is important. For managers, it presents a complete management plan, including how to create an environment in which management will succeed, information

requirements of the plan, a process for collecting information, and how to interpret and act on the information collected.

Although asset management is more than asset tracking, in the case of software, which is a portable and decentralized asset, tracking is a key component of the management process. This manual provides very specific instructions for tracking software. It explains the importance of taking inventory and how to do so. It explains how to identify illegal copies of software and describes the steps necessary to verify that your organization's use of software is in compliance with licensing agreements. In addition, helpful tools for

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inventorying software are identified. Using inventory tools is encouraged, but if you do not have access to inventory application software, you will find here detailed instructions for identifying the software that resides on your computers.

## 1.2

### HELPING GOVERNMENTS MANAGE THEIR SOFTWARE ASSETS

Software management is critical to maximizing the benefit of government investment in information technology (IT) resources. Today desktop computers and mobile devices proliferate and

software is significantly upgraded on a regular basis.

A single government organization might be using hundreds of computers and mobile devices deployed at dozens of locations running numerous types and versions of operating system and application software.

The proliferation of desktop computers and mobile devices and the portability of software have created an additional reason to manage software: to ensure its legitimacy. Without an organization's knowledge, its employees might be using illegally copied software. For example, employees might have installed more copies of a software program than the organization's license permits (commonly referred to as software "overuse"). Or, the organization might have unknowingly acquired illegal software from a disreputable reseller.

This manual was written to make software asset management simple, yet effective, and to help governments avoid the cost of legal challenges to the legitimacy of their software assets. It presents clear justification for managing software and encourages organizations not currently managing their software to do so by showing them how.

## 1.3

### HOW TO USE THIS MANUAL

The organization and production of this manual were intended to facilitate its use. If you are not yet convinced of the benefits of software asset management, read Chapter 2, which identifies the benefits and explains how the management process will help you achieve them. Key reasons include ensuring compliance with the law, controlling costs associated with software assets, and improving the performance of the assets, the organization, and its employees. If already

convinced of the benefits, skip to Chapter 3, which explains how to manage your software assets.

The process consists of three major steps.

1. Establish an environment for success. Begin by articulating a software policy statement that addresses the acquisition, use, and disposal of the software used by all government agencies. Employees should be instructed on the requirements and restrictions of the usage policy. Employees responsible for software procurement require specialized training in licensing requirements and proper procurement procedures.
2. Conduct a software inventory. Next, take inventory of the software residing on your computers and online accounts. The software you find and the ways in which it is being used must conform to the government's software policy.
3. Commit to an ongoing process. Finally, an effective software management plan requires continuing actions. It is important to follow sound procurement procedures, to maintain a complete and up-to-date recordkeeping system, and to take corrective and preventive actions. Perhaps most important, communicate with employees to encourage participation in the process and adherence to policy.

To assist you in getting started, this manual includes information and examples of documents that will be used in or generated by the management process. Exhibit A contains a model government decree on the illegal use of computer software. Exhibit B contains a sample software policy statement that can be adapted for use by your agency or organization. Exhibit C contains an example of the type of form you could use to

record and disseminate information regarding the software supported by your organization. Exhibit D contains a sample software inventory worksheet to guide your data collection efforts. Exhibit E presents an analysis of a few randomly selected software products that can help you inventory software and meter its use.

## WHY MANAGE SOFTWARE ASSETS

In today's dynamic environment of dispersed desktop computers and other IT assets, managing your software assets is necessary to:

- Ensure your software is legal and being used in compliance with licensing terms;
- Control costs associated with the asset; and
- Improve asset and organization performance.

### 2.1

## ENSURE COMPLIANCE WITH THE LAW

Computer software is protected under copyright law and cannot be used, reproduced or distributed without the manufacturer's express authorization. Copies of computer software are typically licensed, not sold, to the user. Accordingly, your right to use, reproduce, and distribute a software program is subject to the terms of the software license agreement, which constitutes a valid legal contract between the licensee and the software publisher.

The software license gives the software publisher a claim for damages in the event you fail to comply with its terms.

A licensed copy of software can be installed and used on only one computer, unless the license agreement expressly permits use of a second copy, for example, at home or on a portable computer. However, a license agreement typically allows you to maintain a backup copy of software for archival purposes.

In addition to licensing agreements, copyright law protects software publishers from the unauthorized copying, distribution, and sale of software. In today's digital era, copyright law also prohibits users from uploading, downloading, or transmitting unauthorized copies of software via the Internet or other electronic media. Violations of these restrictions are civil and criminal offenses, exposing the infringer to significant civil damages, as well as criminal fines and imprisonment.

Governmental organizations have a key role to play in supporting the protection of intellectual property by ensuring all software and its use are in compliance with licensing agreements and copyright law. Copying, distributing, and using software illegally deprive economies of legitimate and taxable economic activity. Perhaps more important, use of illegal software reduces the reward for innovation and, by doing so, slows economic growth and development. A government decree in support of ensuring all software and its use are in compliance with licensing agreements and copyright law sets the stage for an effective software management plan. Appendix A contains a sample government decree.

### 2.2

## CONTROL COSTS

The second major reason for managing your software assets is to control all costs associated

with the assets. An effective management process will:

- Control software acquisition and licensing costs;
- Avoid unnecessary hardware and bandwidth costs;
- Control software support costs; and
- Avoid the costs of legal challenges and fines or penalties for use of illegal software and unauthorized use of legal software.

## 2.2.1

### **CONTROL COSTS OF ACQUISITION**

An effective management process minimizes software acquisition costs by identifying and communicating the current and future software needs of your organization, budgeting for software acquisition, and purchasing only what is necessary while doing so in conformance to clearly defined procurement procedures.

Budgeting is key. You must identify planned software expenditures in a separate line item of your IT budget and track your actual versus planned expenditures. By doing so, you can more accurately evaluate your needs, ensure that software acquired is legitimate, and plan for future acquisition. Large organizations often devote 25 percent of their IT budgets to software.

## 2.2.2

### **AVOID COSTS OF UNNECESSARY HARDWARE**

A software management process allows an organization to identify and communicate with its

employees the software it currently supports, as well as expected upgrades, substitutions, disposals, and data and program retention policies. By collecting and sharing this information, software, data, and program files can be managed on a systematic basis with a minimum of disruption. In addition, the non-disruptive removal of software no longer supported frees space on existing hardware, thereby helping organizations avoid the costs of unnecessarily upgrading or replacing hardware.

## 2.2.3

### **CONTROL SOFTWARE SUPPORT COSTS**

By identifying your organization's current and future software needs and specifying when software will cease to be supported, you can control the cost of supporting software and avoid the cost of renewing licenses unnecessarily or in overly expansive terms. Control can be effected by a management process that regularly reviews the organization's software needs, updates the list of supported software periodically, and clearly communicates in advance when various applications and versions will no longer be supported and, hence, removed from the organization's computers.

## 2.2.4

### **AVOID LEGAL CHALLENGES, PENALTIES, AND FINES**

Your agency or organization can avoid the costs of legal challenges, fines, and penalties by implementing the software asset management process described here. The process will generate a record of documentation necessary to avoid these costs. The record will include:

- A written statement of your organization's software policy;
- Evidence of employee acknowledgement and understanding of the policy, the management process, and his or her responsibilities;
- A complete and current inventory of your software assets; and
- Documentation of all actions taken in support of the management process.

## 2.3

### IMPROVE PERFORMANCE

In addition to more effective control of costs, which improves the performance of all organizations, a software asset management plan will:

- Ensure software quality and reliability;
- Maximize IT resource compatibility;
- Anticipate and take advantage of change; and
- Increase employee productivity.

#### 2.3.1

### ENSURE SOFTWARE QUALITY AND RELIABILITY

An effective software management process will ensure the quality and reliability of the software. Illegally copied software which can be defective or infected with a virus, obsolete, or recently released but not adequately tested can be identified, avoided, and, when found on the organization's computers, removed. Licensed software, on the other hand, offers the assurance of product authenticity and

quality, the warranty of the software publisher, documentation, instruction manuals, tutorials, product support (including upgrade information and trouble-shooting services), and training.

#### 2.3.2

### MAXIMIZE IT RESOURCE COMPATIBILITY

With the numerous types and versions of software available in today's market, issues of compatibility often arise. If employees in one part of your organization require documents created by a specific application, but employees in other parts of the organization use only an incompatible application, you must weigh the decision of whether to authorize the use of, support, and training in both computer programs. By managing the lifecycle of your software assets, you generate the information necessary to address compatibility issues and weigh tradeoffs on the basis of all costs and benefits.

#### 2.3.3

### ANTICIPATE AND TAKE ADVANTAGE OF CHANGE

An effective software management process will make it easier to anticipate and take advantage of change both technological and organizational while minimizing its potentially adverse consequences. In the course of the management process, you will be identifying and communicating the current and future software needs of your organization. Reactions within the organization will lead to a clearer understanding of future needs and additional insight into the advantages and disadvantages of deploying anticipated technology

sooner rather than later. The process will help you avoid the acquisition of software on the verge of becoming obsolete as well as new still unreliable software.

### 2.3.4

## INCREASE EMPLOYEE PRODUCTIVITY

Computer software has dramatically transformed today's business and organizational environments. Because of software, today's workers are more efficient and businesses are more productive. Software has reinvented old notions of bringing products and services to customers and established real-time communication as a cornerstone of organization effectiveness.

Software asset management ensures that workers have the tools they need to accomplish their tasks efficiently, and the education and training they need to use the tools effectively.

## HOW TO MANAGE SOFTWARE ASSETS

An effective software management process consists of three major tasks. First, you need to create the right organizational environment, one in which all employees are committed to the success of the process. Next, you need to take inventory of your assets. You need to know what you have before you can manage it. And finally, you must be prepared to take action corrective and preventive and you must keep policy, procedures, and information current.

The right organizational environment is one in which employees are receptive to the goals, decisions, and actions of the management process. This environment can be created if you:

- Articulate and communicate a clear statement of software policy;
- Obtain employee understanding and acknowledgement of the policy;
- Identify, distribute, and regularly update a list of supported software and authorized use;
- Establish a repository for master disks of purchased software, all software licenses, software documentation, purchase invoices if available, and information generated by the management process; and
- Develop, implement, and regularly monitor adherence to software procurement procedures.

Taking inventory of your software is a critical component of the management process. You must identify all software residing on your organization's computers, and collect and store in a secure repository the licenses and documentation for the software your organization supports.

Finally, be prepared to take action. Corrective action might be necessary to align inventory with policies and procedures, as well as licensing agreements. Stay current by regularly updating the list of software supported by your organization and updating, as necessary, the terms of your licensing agreements. And take preventive action to minimize the need for future corrective action.

### 3.1

## CREATE AN ENVIRONMENT FOR SUCCESS

You must build out the organizational environment in five dimensions. Remember, no management

process will succeed if its goals are not clearly defined and achievable, if responsibilities are unclear, or if there are no consequences to actions taken or not taken in the process.

### 3.1.1

## ARTICULATE AND COMMUNICATE A CLEAR SOFTWARE POLICY

An effective management plan begins with a clear statement of policy. It should include separate sections for articulating your organization's commitment to three goals:

- Enforcing all applicable copyrights;
- Managing software assets to obtain maximum benefit; and
- Acquiring properly licensed software through an approved procurement process that minimizes the risk of acquiring illegal software.

Appendix B contains a sample policy statement for your organization to consider. The policy statement you develop should be included in your organization's employee handbook. It should also be posted on your organization's employee bulletin board and made available on your Intranet.

### 3.1.2

## OBTAIN EMPLOYEE ACCEPTANCE

To succeed, employees must understand and accept the management process. You can enlist their support by doing three things:

- Clearly describe, communicate, and require acknowledgment of the organization's policy, management process, procurement procedures, and employee responsibilities.
- Educate and train employees to understand what is expected of them, how they can contribute to the success of the management process by knowing how to identify illegal software and by understanding and complying with the terms of software licenses, and how to use the software provided and supported by the organization. Pay special attention to transitional events such as an employee's hiring or departure.

## SPECIFY, COMMUNICATE, AND REQUIRE ACKNOWLEDGMENT

Initially, generate support by clearly specifying and communicating a software policy, a chain of command, and responsibilities of each employee. Include the information in the employee handbook. Distribute the information at new employee orientation. Avoid confusion by requiring each employee to sign a copy of the statement. The signed statement is evidence that each employee has been made aware of, understands, and agrees to comply with the organization's software policy and management process.

## EDUCATE AND TRAIN

Training is an important element of obtaining employee acceptance. You should develop a training program providing instruction in three general areas:

- Understanding the organization's statement of policy, including the

management process, procurement procedures, and employee responsibilities; How to know if software or its use is illegal; and

- How to take advantage of the software assets supported by the organization.

In addition to explaining the policy to new employees during their orientation, helping employees understand the policy and their responsibilities can be accomplished by regularly reviewing with all employees the results of the management process and procurement procedures. An ideal time for review is after completion of a software audit or inventory.

Training employees to recognize when software or its use is illegal begins with an understanding of the many variations of software theft. The five most common types of theft, and how to help employees avoid committing these illegal acts, are summarized below.

**1. End user piracy** occurs when an individual or organization (the end user) reproduces copies of software without authorization. End user piracy can take the following forms:

- Using one licensed copy to install a program on multiple computers;
- Copying disks for installation and distribution;
- Taking advantage of upgrade offers without having a legal copy of the version to be upgraded;
- Acquiring academic or other restricted or non-retail software, the license for which does not permit sale to, or use by, the organization; or
- Swapping disks in or outside the workplace.

**2. Client-server overuse** is a common form of end user piracy. A client-server configuration links multiple computers and permits users to access software stored on a local area network. Client-server overuse often occurs because the organization or its employees fail to understand license restrictions in a network environment. Server software licenses generally limit the number of users on the server, or may require individual access licenses for users. Certain application licenses will authorize use of one installed copy by multiple users, but only within the limits of the license provisions. Exceeding the permitted number or types of users constitutes unauthorized use. License overuse can be controlled by carefully checking software licensing agreements at the time of purchase and installation and educating employees on proper software use.

**3. Counterfeiting** is the illegal duplication and sale of copyrighted material with the intent of directly imitating the copyrighted product.

In the case of packaged software, it is common to find counterfeit copies of the CDs or diskettes incorporating the software program, as well as related packaging, manuals, license agreements, labels, registration cards, and security features. You can guard against the unwitting purchase of counterfeit product by:

- Carefully checking the authenticity of any product you acquire;
- Purchasing from resellers with a reputation for integrity and honest business practices; and
- Ensuring that all user materials and a licensing agreement are included with software at the time of its acquisition.

Any department or groups authorized to acquire software should be aware of the following warning signs that often signify counterfeit software:

- The price of the software is deeply discounted or otherwise appears too good to be true;
- The software is distributed in a CD jewel case without the packaging and materials that typically accompany a legitimate product;
- The software lacks the manufacturer's standard security features;
- The software lacks an original license or other materials that typically accompany legitimate products (e.g., original registration card or manual);
- The packaging or materials that accompany the software have been copied or are of inferior print quality;
- The CD has a gold, blue or bluegreen appearance, as opposed to the silver appearance that characterizes legitimate product;
- The CD contains software from more than one manufacturer or programs that are not typically sold as a suite ; or
- The software is distributed via mail order or online by resellers who fail to provide appropriate guarantees of legitimate product.

4. Hard-disk loading occurs when a computer hardware reseller loads unauthorized copies of software onto the machines they sell to make purchase of the machine more attractive. You can avoid purchasing such software by ensuring that all hardware and software purchases are centrally

coordinated through your organization and all purchases are made through reputable suppliers. Most important, require receipt of all original software licenses, disks, and documentation with every hardware purchase.

5. Online software theft has become more prevalent with the rise in Internet popularity. Employees who download unauthorized copies of software via an Internet site are in violation of the copyright law, just as if they had made an authorized copy from a disk. Although some manufacturers expressly permit their software programs to be downloaded without payment of a licensing fee, these programs are still subject to a licensing agreement. Pay careful attention to educate all employees to the fact that software should not be downloaded from the Internet without express authorization by the official, department or group in charge of software procurement.

The final element of your training program is conventional training. One of your more challenging tasks will be to obtain acceptance of the list of software supported by your organization. Everyone will have a software preference and someone is likely to want an application your organization has chosen not to support. To minimize the likelihood of such outcomes and their potentially disruptive impact, it is critical to offer regular training in the software supported by your organization.

## **PAY SPECIAL ATTENTION TO EMPLOYEE TRANSITIONS**

Employee transitions are critical times in the software management process. Exiting employees need to be debriefed. Their computers should be checked for installed software. They should be

asked whether they have illegally copied onto a diskette or other portable storage medium any software licensed or controlled by the organization. If they had installed copies of the organization's software on their home computers, they should be reminded of their responsibility to delete the programs. The computer previously assigned to the exiting employee must be reconfigured with the software required of the employee(s) to whom the computer will be reassigned.

### 3.1.3

## IDENTIFY, DISTRIBUTE, AND REGULARLY UPDATE A LIST OF SUPPORTED SOFTWARE

You must identify with specificity the software supported by your organization. The list, a sample form of which is contained in Appendix C, must contain information in three broad categories:

- Software currently supported, terms of the license, and authorized number of users;
- Location of the software; and
- Future plans to add, upgrade, and dispose of software.

By following the four steps described below, the list you develop will include the information necessary to fully specify the current state of your organization's authorized and supported software assets.

1. Begin by determining all classes and subclasses of software your organization deems necessary to accomplish its mission. Different classes include operating systems, communications, utilities, word processors, graphic, database, spreadsheet, network, and others. Subclasses are, for example, a

disk operating system and network operating system, data compression utilities, presentation graphics, etc.

2. Within each class and subclass, decide which product and version will be supported and the employees who will be using it.
3. Once the number of employees requiring use of the software is identified determine the number of copies to be authorized and supported by the organization. Of course this will depend on the licensing terms available for the software. Specify the terms of the license chosen.
4. Finally, decide how to distribute the software. Specify the serial number(s) of the computer(s) on which the software is installed, and, when applicable, the organizational unit or department and the employee(s) to whom the computer is assigned.

In addition to developing the list of currently supported software and authorized use, you must project your software needs at least three years into the future. It is important to look ahead to anticipate software upgrades, additions, and disposals. The future schedule of such events, though preliminary and subject to change, should be included in the list of supported software.

### 3.1.4

## ESTABLISH A SECURE REPOSITORY

All licenses and documentation for the organization's authorized and supported software, as well as the original diskettes or CDs, should be collected and stored in a secure central location.

By providing secure storage for the original diskettes or CDs, you will minimize the risk of software theft and unauthorized duplication of software programs. Leaving original disks or CDs lying around often leads employees to mistakenly believe they are spare copies that can be loaded onto their computers.

### 3.1.5

## DEVELOP AND IMPLEMENT SOFTWARE PROCUREMENT PROCEDURES

Your organization should develop and implement an official software procurement process. Any department or group authorized to purchase software should be trained in general licensing requirements and proper procurement procedures. The process begins with a formalized request for authorization to purchase software, an evaluation and justification of need, and identification of the channels through which the software must be purchased. Additional procedures that should be part of the process are listed below.

- Require that all purchases of software be made through a purchasing department or group designated with such responsibility for the organization;
- Require that all requests be submitted in writing and approved by the department manager with budgetary signing authority;
- Disallow reimbursement of any employee expense charged to an employee expense account that was expended for software acquisition;

- Require that all software purchases be made through reputable, authorized resellers;
- Require that all software purchases be accompanied by related user materials (e.g., manuals, registration cards, etc.) and all proper licenses and receipts evidencing legal acquisition and use; and
- Disallow purchase of software not included in the organization's list of supported software.

Part 3 of the sample software policy statement in Appendix B contains a suggested procurement process statement. To ensure compliance with the process, periodically review records of software purchases.

### 3.2

## TAKE INVENTORY

The second major task of an effective software asset management process is inventorying all software residing on all the organization's computers, the original licenses for all software supported and authorized for use by your organization, and all software documentation (including purchase invoices if available). You must know what you have before you can manage it. By comparing the results of this initial baseline inventory to the organization's software policy and list of supported software, you will be able to identify and delete illegal software and software you no longer officially support, and identify and stop use in violation of your software licensing agreements. Your organization's progress in this effort should then be monitored through subsequent periodic audits or inventories.

## 3.2.1

### ACCOMPLISH THREE TASKS

The software inventory must generate information that allows you to accomplish three tasks:

- Identification of all software residing on your organization's computers;
- Identification of illegal and unsupported software residing on your organization's computers; and
- Identification of software use that is not in compliance with the organization's policies and procedures, copyright law, or licensing agreements.

### IDENTIFY SOFTWARE RESIDING ON THE ORGANIZATION'S COMPUTERS

The inventory begins with identification of all software found on the organization's computers. The process consists of the following tasks:

- Record the serial number of the computer, workstation, or server being analyzed.
- Record the organizational department to which the computer is assigned.
- Record the name of the employee(s) to whom the computer is assigned.
- Inspect the contents of the computer or workstation's hard disk and, if networked, the server and other locations where software might be found.
- Identify any hidden files and directories and record the details of any such occurrences for subsequent investigation.

- For software with single user licenses, record the serial number of each. For networked computers, record the licensing information for the software found on the workstation and server.
- Ask the manager and staff if any software is maintained on floppy diskettes, and, if so, inspect the diskettes.
- Inspect the computer and user areas for evidence of any photocopied material such as user guides.
- Ask the manager and staff if any unauthorized software is used in the department.
- Review the findings and compare them with the list of supported software, and the licenses and documentation stored in the repository.

Appendix D contains a sample form for recording the information that must be collected in the software inventory. Specialized inventory application software, which is discussed later, can be used to make the inventory job relatively easy.

### IDENTIFY ILLEGAL AND UNSUPPORTED SOFTWARE

The identification of illegal and unsupported software is accomplished by comparing the results of your inventory to the list of software supported by your organization. Although the task is straightforward, it can involve additional analysis. Some executable files found on the computers might appear to be a software program not supported while, in fact, they are components of supported software or otherwise legitimate instruction sets.

### IDENTIFY UNAUTHORIZED USE

The identification of unauthorized use is accomplished by comparing the terms of the licensing agreements you have for your supported software with the number of computers on which the software was found and the number of users having access to the computers. Software metering applications, which are discussed later along with other inventory application software, can help to ensure that software use is in compliance with the software license.

### 3.2.2

## CONDUCT THE INVENTORY IN ACCORDANCE WITH FOUR GENERAL STANDARDS

You should conduct the software inventory in accordance with standards regarding the qualifications of people who will take the inventory, the independence of these people and their organization, their exercise of professional care in conducting the inventory and preparing inventory reports, and the presence of quality controls.

A person or team that collectively possesses adequate professional proficiency for the tasks required should take the inventory. Look for the following qualifications:

- Knowledge of and experience with the methods and techniques applicable to inventorying software;
- Knowledge of the programs, activities, and functions of your organization; and
- Good communication skills.

The person or team should be free from personal and external impairments to independence. In addition, an independent attitude and appearance

must be maintained. It is important that the opinions, conclusions, judgments, and recommendations of the person or team be impartial and viewed as impartial by knowledgeable third parties.

Due professional care must be used to conduct the inventory and prepare inventory reports. The person or team should use sound judgment in establishing the scope and timing of the inventory, selecting the methodology and specific procedures, and evaluating and reporting the results.

### 3.2.3

## RELY ON THE ELEMENT OF SURPRISE, YET INCLUDE ALL COMPUTERS

Once the organization's entire software base has been examined in the initial baseline inventory, the organization should conduct periodic inventories to monitor compliance. For these subsequent inventories, it might not be practical to include all computers in a single procedure. In such circumstances, a sample of computers should be inspected, but over the course of a year, every computer should be reinspected and its installed software included in the inventory.

### 3.2.4

## SPECIALIZED INVENTORY AND METERING APPLICATIONS CAN MAKE THE JOB EASIER

Specialized application software can inventory and meter the use of your organization's software.

When possible, these tools should be used. They will make the inventory process more efficient and help you more accurately manage software use. Evaluate specific products available in your market by answering the following questions:

- Is the application effective for an organization this size;
- Does the application work in a networked or stand-alone environment;
- How does the application recognize software and, if by comparing to known products included in a database, how often is the database updated;
- How is the application deployed;
- What is the application's user interface;
- What are its reporting capabilities,
- What support is available;
- And What is the cost of the application?

Appendix E contains a matrix summarizing five randomly chosen inventory applications and two randomly chosen metering applications. Please do not interpret the inclusion of these specific products as indication of support for them over the dozens of others that are on the market today or about to be brought to the market.

### 3.2.5

## OTHER OPTIONS

You can conduct the software inventory without the use of specialized application software. The process will take additional time and, with respect to monitoring software use, the information generated is likely to be less precise. Nevertheless, the process will generate the information you need to guard against the

possibility of illegal software and illegal use of software in your organization.

## 3.3

### TAKE ACTION

The final major component of the management process is action. You must be prepared to take corrective action when necessary and preventive action to minimize the need for future corrective action.

#### 3.3.1

### TAKE CORRECTIVE ACTION WHEN NECESSARY

There are two breaches requiring corrective action. Whenever either is found to have occurred, all employees must be informed and reminded of their responsibilities to the organization's software policy and management process.

### CORRECT BREACHES IN SOFTWARE POLICY

When an employee is found not to be in compliance with the organization's software policy, he or she must be informed of the breach, reminded of his or her acknowledgment of responsibility to the policy, asked to cease such behavior, and warned that if future breaches occur, they could be grounds for dismissal. A written record of all such instances should be included in the employee's personnel file. Employee notification is important, and these corrective measures should be taken only once an employee has been properly advised of the software policy and has subsequently been found in violation.

## **CORRECT BREACHES IN LICENSING AGREEMENTS AND COPYRIGHT LAW**

When the infraction is a breach of copyright law or the terms of a software license, the incident has potentially serious consequences for the employee and the organization.

If the inventory were to reveal illegal copies of software residing on the organization's computers, the copies must be deleted immediately. If the infraction is severe and found to be widespread throughout the organization, senior managers should be informed. You might also want to inform the copyright holder if the discovery revealed information (such as the location of an illegal software copying and distribution operation) that would be of benefit to the copyright holder. All efforts should be made to identify the employee or employees responsible for the violation. The incident and its final outcome should be recorded and maintained with all other documentation in the secure repository. All violations attributed to a specific employee should be recorded in the employee's personnel file.

If the inventory were to reveal software use not in compliance with licensing terms, all users of the particular product must be informed of the infraction, and, if necessary, a new licensing agreement must be struck to include use by those whose use had previously not been covered by the license.

### **3.3.2**

## **ALWAYS TAKE PREVENTIVE ACTION**

To minimize the number and severity of breaches, you should take preventive action in three arenas: the environment for success, taking inventory, and procurement.

## **MAINTAIN THE ENVIRONMENT FOR SUCCESS**

To maintain a workplace environment in which the management process will succeed you should strive to stay current by regularly updating your list of supported software and authorized use, modifying the availability of products to reflect changing patterns and intensity of use, and communicating with employees.

## **REGULARLY REVIEW LIST OF SUPPORTED SOFTWARE AND USE**

Demonstrate the organization's interest in ensuring that its employees have the software they need by regularly reviewing the list of supported software and authorized use. Seek out the opinions of those who are more reliant on software. And strive to understand why some employees appear to have little need for software. When necessary, modify the list, announce the changes, and distribute the new list throughout the organization.

## **WHEN NECESSARY, MODIFY THE LICENSE OR NUMBER OF COPIES**

When software use changes, modify the number of copies you support or the type of license to reflect the new situation. In times of increasing demand for a particular product, too few copies or a license that is too restrictive places the organization in

greater jeopardy of its employees violating licensing agreements. And when demand is declining, you do not want the organization supporting copies or renewing licenses that are not necessary.

## **KEEP COMMUNICATION OPEN**

Seek opportunities to communicate with employees about their software needs, experiences with specific products, policy and process responsibilities, and management results. Employees must see that their actions have consequences.

## **CONDUCT RANDOM SPOT INVENTORIES**

Regrettably, human nature is such that often the element of surprise is necessary to obtain a clear picture of behavior. It is important to periodically take inventory. Select the computers to be

inspected. Targets could include computers previously found to be in breach of policy or law. Announce the results of all such random spot checks.

## **PERIODICALLY REVIEW SOFTWARE PROCUREMENT RECORDS**

Periodically review the record of software procurement to determine whether those responsible for procurement are adhering to the organization's procurement policy. Whenever a legal breach is discovered through the process of inventorying software, every attempt should be made to determine whether the breach was due at least in part to a failure to follow the official procurement procedure

## APPENDIX

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### EXHIBIT A

#### MODEL GOVERNMENT DECREE ON LEGAL SOFTWARE USE

WHEREAS the use of proprietary computer software has become essential to the mission and operation of the executive agencies of the Government, and the Government is a major user of information technology;

WHEREAS proper software management is critical to ensuring that the Government receive the full benefits of its software use and operate in compliance with its own and all relevant copyright laws;

WHEREAS the unlicensed copying and sale of computer software are illegal and seriously undermine employment opportunities and tax revenues generated by the computer software industry;

WHEREAS the Government must set an example for other public and private entities regarding proper software management by ensuring that it is not a party to computer software piracy.

It shall be the policy of the Government that:

1. Each executive agency shall work diligently to prevent and combat computer software piracy in order to give effect to intellectual property rights associated with computer software by observing the relevant provisions of international agreements, including the World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property and the Berne Convention for the Protection of Literary and Artistic Works, as well as the relevant provisions of national law.
2. Each executive agency shall ensure that budget proposals relating to computer software and data processing needs include adequate resources for the purchase of sufficient computer software to meet those needs. These resources should be delineated as a separate line-item in the agency's budget.
3. Each executive agency shall establish systems and controls to ensure that the agency has present on its computers and uses only computer software in compliance with applicable copyrights. These systems and controls shall include:
  - a. appointment of a responsible Chief Information Officer (CIO) for each executive agency, who shall certify that agency's compliance with software management policies annually to the appropriate central office;
  - b. completion of an initial inventory of the software present of the agency's computers and the number of copies of each program for which the agency has valid licenses;
  - c. following completion of the initial inventory, deletion of any software programs in numbers exceeding the valid licenses held;

- d. development and maintenance of adequate record-keeping systems to record the results of the initial inventory and thereafter track the acquisition of additional software licenses and the installation or use of additional copies of software permitted under such additional licenses, ensuring that such records at all times indicate licenses sufficient to cover all software in use and maintain all license documentation in a single place;
- e. channeling all software purchase requests through a single point monitored by the CIO;
- f. institution of periodic inventories of each executive agency's computers to determine the continued accuracy of the agency's software record-keeping systems; and
- g. implementation of an agency-wide information and training program for employees regarding the necessity of legal computer software use, including signature of a written compliance notice and establishment of disciplinary offenses and penalties for non-compliance.
- h. In connection with the acquisition and use of computer software, the head of each executive agency shall:
  - i. establish and maintain a comprehensive software management policy and an effective program to ensure proper acquisition, distribution, management, use, and disposition of all computer software products;
  - j. ensure that the policies, procedures, and practices of the agency related to intellectual property rights protecting computer software are adequate and fully implement the policies set forth in this order;
  - k. ensure agency compliance with the intellectual property rights protecting computer software and the provisions of this order by establishing agency-wide management structures and processes to ensure that only legal computer software is acquired for and used on the agency's computers;
  - l. establish performance measures to assess the agency's compliance with intellectual property rights associated with computer software acquired, distributed, or used by the agency and with the provisions of this order;
  - m. direct and support appropriate training of agency personnel regarding intellectual property rights associated with computer software and the policies and procedures adopted by the agency to honor them.
4. In connection with all third-party contractors and applicants for funds administered by the agency, each executive agency shall:
  - a. require the applicants to certify, as a condition of approval of any funding application, that they have appropriate systems and controls in place to ensure that agency funds are not used to acquire, operate or maintain computer software without proper authorization, including: (1) the institution of reasonable inventory procedures to ascertain that the computer software present on the computers acquired or operated with agency funds is legal and (2) the provision of the inventory results to the agency;

- b. withhold agency funds, as it deems appropriate, from any applicant found to be using illegal computer software with respect to any program supported by the funds, until such time as it has been established to the satisfaction of the agency's auditors that reasonable steps have been taken to ensure that illegal software is no longer present on that applicant's computers used with respect to any such program;
5. Each agency shall cooperate fully in implementing this order and shall share information as appropriate that may be useful in combating the use of computer software without proper authorization.

## EXHIBIT B

# SAMPLE STATEMENT OF ORGANIZATION'S SOFTWARE MANAGEMENT POLICY

### Part 1. General Responsibilities

The Policy of [organization] is to manage its software assets to derive maximum benefit to [organization] and its employees and, especially, to ensure that [organization] and its employees: Acquire, reproduce, distribute, transmit, and use computer software in compliance with international treaty obligations and [insert country name] laws, including the [insert specific key laws]; and maintain only legal software on [organization's] computers and computer networks.

All software is protected under [country specific] copyright laws from the time of its creation. [Organization] has licensed copies of computer software from a variety of publishers to help fulfill its mission. Unless otherwise provided in the software license, duplication of copyrighted software, except for backup and archival purposes, is a violation of the [applicable law] and this Policy.

You may not knowingly use software for which [organization] lacks the appropriate license. If you become aware of the use or distribution of unauthorized software in this organization, notify your supervisor or the Office of the Chief Information Officer (CIO).

You may not loan or give to anyone any software licensed to this organization.

The licenses for some of this organization's software permit employees of the organization to make a copy of the software for home use. The CIO may approve such use by employees that can demonstrate a need to conduct the organization's business from their homes. Under no circumstances, however, may an employee use the organization's software for purposes other than the business of this organization.

No employee may use or distribute personally-owned software on the organization's computers or networks. Such software threatens the integrity and security of the organization's computers and networks.

A variety of software is available on the Internet. Some of this software, called "freeware" or "shareware," is available free of charge for limited use and may be downloaded to your computer with the prior written approval of your supervisor. Other software available on the Internet and from other electronic sources, however, requires the user to obtain a license for its use, sometimes for a fee. No employee shall download such software to his or her computer without the prior written approval of the CIO.

### Part 2. The Software Asset Management Process

[Organization] is committed to managing its software assets for maximum benefit to the organization and its employees. The process consists of three areas of focus: (1) Creating an environment in which the process will succeed, (2) Reviewing the software assets residing on the organization's computers, and (3) Acting to correct breaches in policy and the law, keep the Policy and its procedures current, and prevent future breaches.

[Organization] will strive to create an environment for success by communicating this policy; educating employees about their responsibilities; training employees in the software supported by this organization; identifying and modifying as necessary the software employees need to fulfill their job responsibilities; establishing a secure repository for original storage media, software licenses, and software documentation; and requiring that all software be procured through official and clearly defined procedures.

As part of this organization's software management process, the CIO shall conduct periodic, random reviews of all organization computers and networks to determine the software resident on such systems and whether the organization has the appropriate licenses for all such software. The CIO also shall conduct periodic, planned reviews, in which the CIO may ask you to complete a Software User Survey. This Survey will be used to determine your existing and future use and need of particular software programs. Your cooperation with all reviews and Software User Surveys is greatly appreciated. The CIO will endeavor to conduct its work with the least possible disruption of your workday.

You may be held responsible for the existence of any software on your computer for which the organization lacks the appropriate licenses. Consequences for such unauthorized use of software range from a reprimand for minor offenses to termination of employment for repeated, willful offenses.

### **Part 3. Software Procurement and Installation Procedures**

All requests for software and software upgrades shall be submitted to the Office of the Chief Information Officer (CIO), where possible.

Any software and software upgrades not acquired by the CIO shall be documented and identified to the CIO, who will verify that the Agency has an appropriate license for the use of such software.

All acquisitions of hardware that include bundled software shall be documented and identified to the CIO, who will verify that the Agency has an appropriate license for the use of such bundled software.

The CIO shall store in a secure, central location all original software licenses, disks, CD-Roms, and documentation upon receipt of all new software, including copies of completed registration cards.

The CIO shall designate those employees authorized to install software on the organization's computers. No employee shall install or distribute software for which this organization lacks the appropriate license. No employee shall install any software upgrade on a computer that does not already have resident on it the original version of the software. The CIO or designated employee shall destroy the original version's backup copy of the upgraded software in its place.

The CIO or designated employees shall destroy all copies of software that is obsolete or for which the organization lacks the appropriate license. Alternatively, the CIO may obtain the license(s) necessary to maintain unauthorized software on organization computers.

The organization's department with procurement responsibility must establish and maintain a recordkeeping system for software licenses, hardware, original CD-ROMs and diskettes, user information, and review

information. Maintain this information in a secure, central location. Consider the use of software management computer programs to automate such recordkeeping.

The organization is committed to communicating this Policy with its employees. The organization will:

- Include the Policy Statement in the employee handbook. Distribute the updated handbook to all employees.
- Train new employees during their initial orientation on how to comply with the Policy.
- Hold seminars on the Software Policy for existing employees to inform them of the types of software licenses, how to detect and prevent piracy, how to implement the Software Policy, and consequences of violating the Policy and relevant law.
- Require new and existing employees whose responsibilities include the installation, maintenance, or oversight of information technology systems to acknowledge and sign the Software Policy Statement.
- Circulate reminders of the Policy on a regular basis (at least annually) or remind employees of the Policy in other ways (at least annually), for example, through notices in agency newsletters.
- Inform employees where they can get additional information on the Policy and software theft prevention.

If you have any questions concerning this Policy or your obligations under it, you may direct them to either your supervisor or the CIO (provide phone numbers, office locations, and e-mail addresses).

EMPLOYEE ACKNOWLEDGMENT OF UNDERSTANDING AND RESPONSIBILITY:

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Printed Employee Name

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Employee Signature

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Date





## CONCLUSION

Software asset management is simply a set of techniques designed and implemented to obtain the potential benefit of investments in software, and reduce the risk of exposure to and use of illegal software. You can accomplish these goals if you focus on creating a workplace environment receptive to the management process, commit to regularly taking inventory of your software and its use, and demonstrate that actions have consequences.

For further assistance, contact BSA | The Software Alliance at 1-888-NO-PIRACY or visit its Web site: [www.bsa.org](http://www.bsa.org).

Since 1988, BSA has been the voice of the world's leading software companies before governments and with consumers in the international marketplace. BSA initiatives include educating computer users on software copyrights and assisting governments and businesses establish effective software management programs.

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### **BSA Worldwide Headquarters**

20 F Street, NW  
Suite 800  
Washington, DC 20001  
USA  
Phone: +1.202.872.5500  
Fax: +1.202.872.5501

anti-piracy hotline:

1.888.NO PIRACY

### **BSA Europe, Middle East & Africa**

2 Queen Anne's Gate Buildings  
Dartmouth Street  
London SW1H 9BP  
United Kingdom  
Phone: +44.20.7340.6080  
Fax: + 44.20.7340.6090

### **BSA Asia**

300 Beach Road  
#25-08 The Concourse  
Singapore 199555  
Phone: + 65.6292.2072  
Fax: + 65.6292.6369



[www.bsa.org](http://www.bsa.org)

