

## **Contact Information**

Publications@ipcg.com

ipCapital Group, Inc.  
400 Cornerstone Drive, Suite 325  
Williston, VT 05495  
United States of America  
(802) 872-3200 x214

## **Title of the Invention**

System for Tracking and Enforcing Software Licenses

## **Description of the Invention**

A system is established by which the Media Access Control (MAC) address of a user's machine and corresponding software license information is stored on third party server. A License Module within the operating system prevents the use of an application until the license is verified with the third party server.

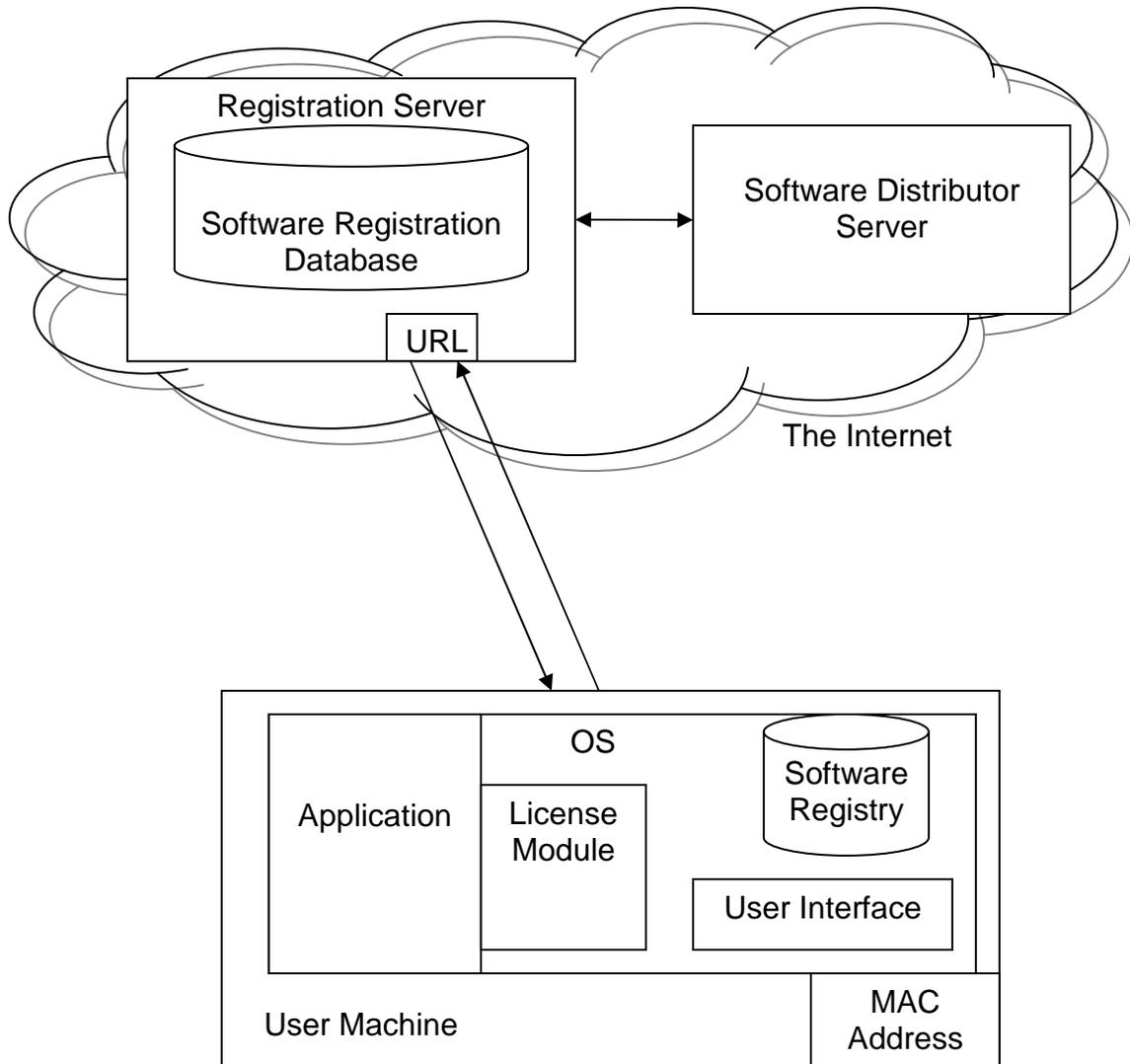
## ***Problem or Opportunity***

When a software vendor sells a piece of software, the vendor expects that each legitimate software copy is to be used by only one user or organization. However, because of the nature of software, it is easy to reproduce and distribute illegal copies for little or no expense. The livelihood of the software vendor depends on individuals and organizations purchasing software from the vendor.

Software licenses traditionally consist of a simple, terms of use, agree/disagree decision. This method relies upon the integrity of the licensee and gives the licensor little assurance that the license agreement is not being violated. There is no mechanism for the enforcement of such software licenses and as such, software pirating is rampant. A method for enforcing and tracking software licenses is necessary.

## ***Detailed Description of the Invention***

This invention requires the user of a software application to register the software online, with a third party server, upon installation. This registration will include a license ID, specific to the copy of the application possessed by the user, and the user machine's unique MAC address. Each time the application is initiated, a License Module, within the operating system, verifies the license with the third party server before the user can access the application. This ensures that each copy of the software can only be used on one machine.



**Figure 1. Software Licensing System**

Figure 1 depicts the system for tracking and enforcing software licenses using a Software Licensing System.

The User Machine is the computing device (i.e. desktop computer, laptop, mobile device) on which the user desires to install and use a licensed piece of software.

The OS is an operating system, such as Linux, that manages applications and user interactions.

The Application is a software application that is licensed to the User Machine.

The User Interface is the graphical user interface or command line interface through which the user communicates with the User Machine.

The License Module is a module within the operating system that manages the software licenses by communicating with the Registration Server and preventing unregistered applications from launching.

The Software Registry is a database within the operating system that contains a list of software attributes. These attributes include the executable name, location in memory, software license ID, and the Registration Server URL.

The MAC address is a unique identifier specific to the User Machine. The MAC address is generally assigned by the manufacturer of the machine.

The Software Distributor Server is a server belonging to the software licensor.

The Registration Server is a third party server that stores information about individually registered software licenses.

The Software Registration Database is a database on the Registration Server that contains the registration information specific to each registered machine. The Software Registration Database maintains a list of the software version, license ID, and MAC address associated with each license. The Registration Database also tracks each software license by recording such information as the frequency and location of use.

Figure 2, describes the method of the installation process using the Software Licensing System.

In step 1, the user initiates the installation of the software on the User Interface.

In step 2, user is prompted by a dialog box in the User Interface containing the license agreement. The user is given the option to accept or decline the license agreement. If the license agreement is declined, the installation program terminates and the software is not installed.

In step 3, if the user agrees, the License Module is activated by the installation process.

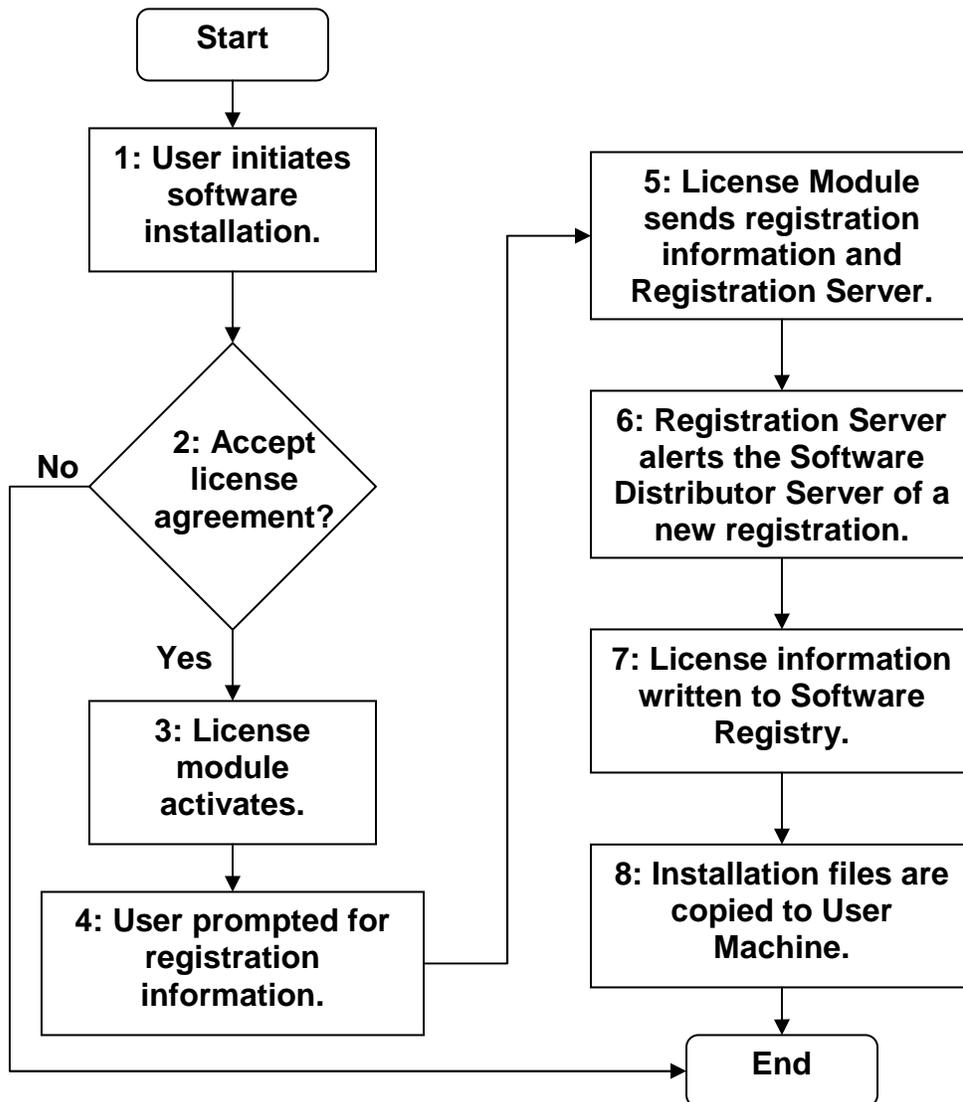
In step 4, the user is prompted by a dialog box in the User Interface to input the user's name, company, license ID, and other relevant registration information. The license ID is a unique identification string that is distributed with each individual copy of the software.

In step 5, the User Machine sends registration information from the License Module, and the MAC address of the User Machine, to the Registration Server. The Registration Server records this information in the Software Registration Database.

In step 6, the Registration Server alerts the Software Distributor Server of the new registration. The Software Distributor Server may communicate with the Registration Server at any time to find out more about the registered licenses.

In step 7, the Registration Server confirms the registration, and the license information is written to the Software Registry.

In step 8, installation files are copied to the User Machine and the installation is completed.



**Figure 2. Method of Software Installation using Software Licensing System.**

Figure 3 describes the method of license verification using the Software Licensing System.

In step 1, the user initiates the application on the User Interface.

In step 2, the operating system activates the License Module.

In step 3, the User Machine queries the Registration Server with the license ID stored in the Software Registry and the MAC address of the User Machine.

In step 4, the Registration Server logs information about the request including license ID, time of request, and location in the Software Registration Database. This allows the licensor to monitor the use of the license

In step 5, the Registration Server compares the license ID and MAC address supplied by the License Module to the information stored in the Software Registration Database. If a match is not found, the process is terminated and the application is not allowed to launch.

In step 6, the Registration Server sends its approval to the License Module.

In step 7, the License Module allows the application to launch.

**Figure 3. Method for Software License Verification Using Software Licensing System.**

