

SYSTEM AND METHOD FOR ADJUSTABLE LICENSING OF DIGITAL PRODUCTS

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Cross-Reference to Related Application(s)

This application claims priority pursuant to 35 U.S.C. §119(e) to U.S. Provisional Application No. 60/ 988,778, entitled "SYSTEM FOR ADJUSTABLE DIGITAL LICENSING OVER TIME," filed November 17, 2007, which application is specifically incorporated herein, in its entirety, by reference.

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Background of the Invention

Field of the Invention

The present application relates generally to managing software use, and more specifically to systems and methods to enable the monitoring and adjusting software usage under a software license.

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Description of the Related Art

A common capability of digital product license systems is the ability to control how many devices are allowed to be used with each product license which is usually sold to an individual customer or company. For example U.S. Patent No. 5,490,216 refers to a system where a license is given to an individual, but in turn that license is linked to a specific personal computer thereby limiting the copyright holders exposure to copyright abuse if the user decided to share their license with other unauthorized users.

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A problem that has arisen over time is the fact that consumers of software have normal patterns of use that include the installation and use of digital products on multiple devices. For example a person may wish to buy software and use it on three computers at their home, a computer at work, a mobile computer and the computers at their holiday home and their parent's house. In addition to these uses, computers are also bought, sold and replaced so over time maybe two or three times this number of

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computers may be used by the user over time with a legitimate need to install and use the software on every computer.

5 Publishers of digital products have a dilemma in that they may want their customers to receive the normal freedom to use the software that they have purchased but they also do not want the software licenses to be freely shared amongst end users or even in worst case shared anonymously over the Internet resulting in massive piracy and copyright abuse of the product.

10 To solve this problem some publishers have set a relatively high device to license ratio in their control systems in the hope that customers will not exceed the maximum number of devices per license. An example of this is Apple iTunes which enables customers to play a purchased music file on up to a preset number (e.g., five) of devices (e.g., PCs) per license before being requested to buy an additional license. They have also implemented a system that allows customers to turn off the license rights of individual devices with regard to a specific music file license and therefore free up that
15 device installation so that the music file can be used on one additional device.

While this method does go some way to appeasing the problem of a normal customers usage expectations, it does not take into consideration the normal attrition that occurs with the purchase and upgrade of personal computing devices or the like and places an expectation on the user to go through a number of involved steps to retain
20 their rights to use the software. Accordingly, there is a need for an improved technique for allowing for a changing number of device installations on a per license basis over time.

Summary of the Invention

25 The following presents a simplified summary of one or more embodiments in order to provide a basic understanding of such embodiments. This summary is not an extensive overview of all contemplated embodiments, and is intended to neither identify key or critical elements of all embodiments nor delineate the scope of any or all embodiments. Its sole purpose is to present some concepts of one or more embodiments
30 in a simplified form as a prelude to the more detailed description that is presented later.

In accordance with one or more embodiments and corresponding disclosure thereof, various aspects are described in connection with adjusting a license for a digital product over time. The license may comprise at least one allowed copy count corresponding to a maximum number of devices authorized for use with the digital product. In one embodiment, a system for adjustable licensing includes: a communication module for receiving a request for authorization to use the digital product from a given device; a processor module in operative communication with the communication module; and a memory module in operative communication with the processor module.

The memory module may include executable code for the processor module to: (a) verify that a license data associated with the digital product is valid based at least in part on a device identity associated with the given device; and (b) in response to the device identity already being on a record, allow the digital product to be used on the given device.

The memory module may further include executable code for the processor module to: (c) in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period; (d) calculate a device count corresponding to total number of devices already authorized for use with the digital product; and (e) when the calculated device count is less than the first upper limit, allow the digital product to be used on the given device.

In related aspects, the processor module may be adapted to: (a) in response to the device identity not being on the record, after the first time period has expired, set the allowed copy count to a second upper limit for a second time period; (b) recalculate the device count; and/or (c) when the recalculated device count is less than the second upper limit, allow the digital product to be used on the given device. For example, the second time period may comprise a defined number of days since the initial authorization. The processor module may be adapted to, in response to the calculated device count equaling the second upper limit, send a warning regarding the allowed copy count to the given device. The processor module may be adapted to, in response to the calculated device count exceeding the second upper limit, deny the request for authorization.

In further related aspects, the processor module may be adapted to: (a) in response to the device identity not being on the record, after the second time period has expired, set the allowed copy count to a third upper limit; (b) recalculate the device count; and (c) when the recalculated device count is less than the third upper limit, allow the digital product to be used on the given device. The processor module may be adapted to, in response to the calculated device count equaling the third upper limit, send a warning regarding the allowed copy count to the given device. The processor module may be adapted to, in response to the calculated device count exceeding the third upper limit, deny the request for authorization.

To the accomplishment of the foregoing and related ends, the one or more embodiments comprise the features hereinafter fully described and particularly pointed out in the claims. The following description and the annexed drawings set forth in detail certain illustrative aspects of the one or more embodiments. These aspects are indicative, however, of but a few of the various ways in which the principles of various embodiments may be employed and the described embodiments are intended to include all such aspects and their equivalents.

Brief Description of the Drawings

Figure 1 is an exemplary set of license rules that may be implemented to adjust the number of device installations on a per license basis over time.

Figure 2 shows an exemplary approach for adjusting a license for a digital product.

Figure 3A shows one embodiment for a method for adjusting a license for a digital product.

Figure 3B shows several sample aspects of the method shown in Figure 3A.

Figure 4 shows one embodiment for a system for adjusting a license for a digital product.

Detailed Description

Various embodiments are now described with reference to the drawings, wherein like reference numerals are used to refer to like elements throughout. In the following

description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of one or more embodiments. It may be evident, however, that such embodiment(s) can be practiced without these specific details. In other instances, well-known structures and devices are shown in block diagram form in order to facilitate describing one or more embodiments.

The techniques described herein allow for a changing number of device installations on a per license basis over time. Aspects of the techniques may include a customer feedback system that warns a user when they are nearing the limit of their device installation ceiling for their license. An example scenario could be as follows. A software publisher wants to commence distribution of a software product and to minimize unauthorized copying of their software. Their license may state that the publisher authorizes the user to use their software on up to, for example, five devices, but that the publisher reserves the right to increase this limit at their own discretion. The customer installs the software on the three computers they have at home. Each time the software connects to a license management server controlled by the publisher over the Internet to ensure that the device limit for the individual license has not been exceeded.

The customer may choose to install the same software on their personal computer (PC) at work. Upon contacting the publishers license management server over the Internet a message is displayed to the user warning them that they are nearing the limit of their device count for their license.

Two weeks later the user wishes to install their software on the two computers they own at the customers holiday home. If the publisher uses the proposed invention the maximum number of devices for the license may have been adjusted to accommodate a reasonable small increase in the number of devices linked to a specific license and both PCs may be allowed to install and run even though the publishers stated device limit per license is five.

Then three months later, the user experiences water damage from a flood in their house and a new PC is purchased. Upon installation of the protected software the invention will allow the user to obtain additional device installations from the publishers license management server for the same license (e.g., up to a total of seven devices) even though the device limit is initially set to five. However, if that user shares

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