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Initial comment to the 2008 Notice of Inquiry on the Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies.

Proposed Class of Works: Computer programs protected by dongles that prevent access due to malfunction or damage or hardware or software incompatibilities or require obsolete systems or obsolete hardware as a condition of access.

Argument summary for the proposed exemption: Dongles control access to computer software, if the device is not present, the authorized user can not execute the program. Dongles can malfunction, or can be damaged, or conflict with other hardware or software or require retired operating systems to run or legacy hardware, and prevent the authorized user from accessing software for which the author has already been compensated.

THE TECHNOLOGICAL MEASURE

A dongle is the technological measure. It is an access control device that attaches to either the printer port or the USB port of a computer and prevents a licensed end user from accessing a computer program that has been legally purchased, a non infringing use. Unless the hardware access control device is attached and the required device driver installed and is supported by the operating system, and all are functioning properly, the program will not run. These works are not available in an unprotected format. Dongles have been used since the 1980's and millions of them have been sold.

Please Note: For these initial comments I have limited my examples to a relatively small number of those available.

OBSOLETE HARDWARE

When a software company is no longer in business and cannot offer support for their product, an end-user must be able to circumvent the access control device to ensure the quiet use and enjoyment of their software. Several years ago, I brought forward the example of the Department of Justice, the Immigration and Naturalization Service that used a dongled program from a company that went out of business. Should their replacement dongle have failed, as it had in the past, they would have been unable to produce passports. This summer, I was contacted by the **U. S. Department of Commerce, The National Oceanic and Atmospheric Administration's (NOAAA) National Marine Fisheries Service.** They used a dongled program to input mission-critical fisheries and research data and the software company was no longer in business and the dongle was obsolete. Mr. Chan said in his letter to me, "If our dongles were to malfunction, we would not be able to run copies of the application, and our data entry production would be severely hindered". (Exhibit 1)

In November of this year, I was contacted by an employee the **City of Fort Lauderdale**. His department monitors and manages the Public Safety Radio System and uses dongled software to do so. He has experienced multiple issues with the dongle. First the manufacturer has stopped supporting the software and dongle. Continued budget cuts prevent them from moving to more expensive software, "even though (the current software) … still will meet our operational needs. The software also requires a computer with a parallel port to plug in the dongle and it is more and more difficult for them to obtain them.   A number of years ago, they had lighting damage to that programs dongle and "it was extremely difficult to obtain a replacement dongle from the vendor. Should we be struck by lightning again, will shift from extremely difficult to totally impossible" to replace the dongle. It really isn't a question of "if" we will be hit; it is a question of 'when' we will be hit." (Exhibit 2)

Downtime for users like this could be disastrous. For the City of Ft. Lauderdale, downtime to the Public Safety Radio System could mean lives might be lost, especially during a hurricane.

This has lead to companies putting into place a disaster recovery plan. Steve's software program comes from the USA, he is located in Australia. They would have to wait days to get a replacement dongle, after first sending in the damaged one. (Exhibit 3)

There are times when a company will upgrade a parallel port dongle to a USB type dongle however end users are forced to either upgrade to a newer version of software when their current version serves them just fine, or pay exorbitant fees just to trade in a dongle. Zemax is a software program used for Optical System Design. The program sells for $5,000 per user and for 10 people to use the software, a license would cost a company $50,000. However you cannot simply trade in your older dongle for a $25 replacement, you must have a current support contract, even if you do not require any support and the software has been working and serving your needs just fine. In this case, a 10 user, 1 year, non refundable, no items to be delivered support contract, will cost a whopping $7,000, that is Seven thousand dollars, to exchange a $25 device. (Exhibit 4)

I have also seen that companies must keep both the old version of the software running even if they upgrade to a newer version. One reason for that is file formats are not always compatible between versions and the "old and new scripts are being used in parallel by different research groups" (Exhibit 5)

Another customer has a software program that is used with Radio Equipment and uses a contemporary dongle, a Rainbow Sentinel Superpro, however the software will only run in pure DOS, not shelled out through Windows. Here we have a undamaged dongle that has not even malfunctioned yet, however it requires an obsolete operating system to run, DOS and can only run on a system with a parallel port. DOS applications can only check the LPT port, USB ports did not exist then. (Exhibit 6)

In my 2006 testimony, I documented that when SafeNet Inc bought dongle maker Rainbow Technologies, they stopped producing older dongles in the Rainbow line such as the PRO, C, SCOUT, SCRIBE. Hundreds of thousands of these devices are in the marketplace today and replacements are not available for them.

DONGLE FAILURES

Like any piece of computer hardware, these devices can fail or be damaged, which prevents a licensed user from running the software they have purchased, a non infringing use.

Newer USB dongle technology versus the older printer port type, does not always mean better or more reliable. Dongle users, using dongles from the manufacturer SafeNet, were experiencing broken or damaged dongles. So much so that SafeNet announced a "new and improved housing", that was more durable, fit deeper into the USB port and could withstand over 300% more force than its previous design. (Exhibit 7) Perhaps in a public relations or sales tool move, they felt it necessary to hire a laboratory to conduct a breakage test between the new design and that of some of their competitors. According to this test by Trace Laboratories, the largest dongle manufacturer in the world, Aladdin Knowledge Systems, now makes the easiest to break USB dongle tested, the HASP HL. (Exhibit 8)

A gentleman writes me that his software manufacturer had been first sold, so he upgraded to their new version, and then the new company went out of business. During that time he has had several dongle failures and fears he will never find another key if another one should fail. He even received permission from the most recent owner to pay someone to rebuild the program without the dongle, but when they went to do it, even the software's owner did not have all the files required to do so. This is not so unusual, especially with the software changing hands, since once a program has been built, the software

code and files needed to compile the software could easily have been lost. Plus the developer tools needed to build the program had long been out of production. (Exhibit 9)

An email from a user named "redhatbear" had two dongles damaged and the distributor of the software told him it is not their responsibility to replace a damaged key and that one under warranty is not their responsibility. (Exhibit 10)

This customer was correct that he has a failing dongle. He mentions it has a DS and a number on the case. This indicates it was made by Dallas Semiconductor, which was sold in 2007, and uses a battery with a limited life, that I have testified to in previous hearings. (Exhibit 11)

This gentleman had his dongle fail under Windows XP and his software program is no longer supported. (Exhibit 12)

A dongle manufacturer called RockKey states that most of their failed LPT port keys come from overvoltage, either from the computer or peripheral devices. (Exhibit 13)

Software manufacturer Delcam that makes the Artcam software notes that they have had dongle failures when the dongle ID has changed. (Exhibit 14a)

SOFTWARE/OPERATING SYSTEM INCOMPATIBILITIES

These dongles do not operate on their own. Beginning with Windows NT, hardware and software programs could not "talk" to each other directly. Instead they must communicate through a device driver. Some of these products are not compatible because the driver for the operating system is not

available. This is an issue that needs to be addressed because the physical hardware piece is intact. It has

not been damaged; technically it has not even had the opportunity to malfunction. However it is obsolete

on a current operating system. This is why the proposed class of works, using the "or" obsolete is

needed.

From IAR systems, the "combination of a green dongle and the Windows Vista do not work. The driver

for the dongle cannot be installed in windows vista. (Exhibit 15)

The same is true with the Microphar dongle; this device could function under Windows 9x, however

there are no drivers for this device under Windows NT or above. (Exhibit 16)

Ilearninteractive quotes some Aladdin support documents indicating a dongle might not be found with a

busy network with a lot of noise, or incompatible versions of the license manager, or 2 or more license

managers conflicting or 2 or more hasp keys connected. (Exhibit17)

A user works in a program called FeatureCam that uses a printer port dongle but also uses a Tormach

CNC milling system that operates on the printer port, as a result, the mill starts moving erratically. "

(Exhibit 18)

AlphaCam uses the Sentinel License Manager but it conflicts with older versions of the same software

causing the other software to stop working. (Exhibit 19)

Microsoft in April of 2008 put out a update to Windows Vista, called service pack 1. And if you had

automatic updates selected, which is suggested, you would have received it. What you would have found

out was that many users found their USB devices (dongles) unresponsive and removing and reinstalling the programs did not solved the problem. It took weeks before the issue was resolved. (Exhibit 20)

At Rainrecording, they document that multiple profiles can create conflicts with hardware setups such as USB based hardware protection keys, Since many audio hardware and software products have intricate windows registry entries, the use of multiple user profiles may not have been on the check list for the programmers of these products when they were designed. Therefore this type of setup was not likely tested. (Exhibit 21)

Microsoft has listed certain dongle incompatibilities with its operating systems. Stop error when you resume a computer that is running Windows XP or a 64-bit version of Windows Server 2003 from hibernation (Exhibit 22) and another,

The system may not correctly detect a Rainbow Sentinel SuperPro USB dongle when a computer that has Winternals Administrator's Pak installed is running Windows XP or Windows Server 2003 (Exhibit 23)

Chief Architect software **Important Notice for Windows XP Service Pack 2 Users:** Due to continuing changes in the security of Windows XP Service Pack 2, the hardware lock drivers shipped with Chief Architect 9.5 and older will not install properly on computers using this operating system. Users of Version 10 and later should not experience this problem; but in some situations, automatic installation of the drivers may fail. (Exhibit 24)

FormSys is a software development company specializing in 3D software for design, analysis and construction. Specialist areas of application include naval architecture and shipbuilding, and structural engineering. Problem: Windows XP/Windows Server 2003 produces an error when attempting to install the drivers. This seems to have been caused by some changes Microsoft made in some recent Windows Updates. Problem: I've installed the latest drivers for my USB device, but it still doesn't work. Problem: Installation seems to hang while installing HASP drivers. Workaround: Unfortunately the HASP drivers do seem to do this under certain conditions."We're unsure why this occurs - it's unfortunately the drivers from our dongle manufacturer that cause the delay and not our own" … (Exhibit 25)

It should be pointed out that most software is operated by, and I hate to say it, the now famous pair of "Joe Six Pack" or "Joe the Plumber" for their respective fields. These end users know how to design a widget with the software they use, but are not very computer savvy. While it is easy to say," oh but there is a solution to some of these problems", what we don't know is how long it has taken to get to that solution. First it had to be discovered over a period of time, then reported to the software company, then tested and verified, followed by trouble shooting, writing test code, beta code, final testing and releasing an updated version and waiting for the end user to discover the issue has been resolved. In the meantime, users have been frustrated and have wasted enormous amounts of time and money.

DONGLE MALFUNCTION/ HARDWARE INCOMPATIBILITIES

Dongle manufacturers would have us believe these devices are trouble free, but anytime hardware and software must interact, that will never be the case.

Quite often, consumers are forced to use multiples of these devices to run software programs on their computer. Others have upgraded their operating system or hardware and have found that many newer computers do not come with a printer port and they have no way to plug in their access control device and run their software, a non infringing activity.

This gentleman's company uses two dongles across a network however VPN dropouts are causing his dongle to lock him out of sessions. (Exhibit 26)

Aaron had a program with his dongle, had paid for his program, yet the company was unwilling to help them. The software was vital to his company's financial health (Exhibit 27)

Some have suggested that an adapter might help when a PC does not have a parallel port. Selma tried a Parallel port to a USB Port Connector yet the dongle was still not recognized. (Exhibit 28)

One maker of those adapters, Quatech, states in their FAQ's, that the manufacturers of the KeyLock dongle and the manufacture of the Husqvarna Viking dongle will not work with the adapter. The same is true with the Activator dongle. (Exhibit 29)

On the HP support site, a user with a small to medium business computer, the DC5800 can not get his computer to recognize the dongle (Exhibit 30)

Most computers only have one LPT port. Scottweave uses a DK2 dongle, however you cannot "piggyback" two dongles from the same company or "this will corrupt the data inside one or both of the dongles." Other hardware issues include, the printer port must be active, a zip drive or backup device cannot be attached to the dongle, some printer port scanners will fail, and some bi-directional printers may show problems. (Exhibit 31)

The Rockey4 dongle faq, also lists hardware issues, such as: the printer is turned off, the device does not support the printer port parallel mode, it is not compatible with other parallel port devices, cannot be detected through a USb hub, when keys are piggybacked every dongle receives the value request and the system is puzzled. (Exhibit 32)

THE EFFECT OF CIRCUMVENTION ON THE MARKETPLACE

There have been no negative effects on the marketplace since the dongle exemption was first granted in 2000. In fact, the second largest dongle manufacturer, SafeNet has seen continued growth. For the fiscal year 2006, revenues increased from $78-82 million and for fiscal year 2007, revenue increased from $318 to $326 million. (Exhibit 33) Likewise, manufacturer Aladdin showed 2008 quarterly revenue up 19% and gives fiscal year 2008 guidance ranging from $123-$130 million, compared to $105.9 million for fiscal year 2007. Further they show annual revenues growing every year since 1994 (Exhibit 34)

In 2000, 2003, and in 2006, the Librarian of Congress has granted an exemption for dongles. Because of this, more copyrighted works are accessible to authorized users in distress.

Copyrighted works are now more valuable and the exemption has helped the consumer. In our economy today, the big three auto makers have asked for a bailout. One of the arguments in favor of such a bailout is consumers are more likely to buy an auto when they know the company is solvent and will be there to service their vehicle. The same can be said of software, consumers are more likely to buy software when they can be sure that if a company goes out of business, or the consumer has problems with the access control device, there exists a way to continue running the software they have already spent their hard earned money on.

Libraries are able to archive functional works that use dongles thanks to this exemption. Without this, an archived version of a software program could not be run and would be useless, without the dongle or without this exemption.

I respectfully request your review on the dongle issues once again. The major issues have not changed since I met with the board in 2000, 2003 and 2006 and I hope I have demonstrated that again here for the 2009 rulemaking. I also suggest for your consideration, that at some point, it would seem that a permanent exemption is in order.

Sincerely,

Joseph V. Montoro, Jr.

President

Spectrum Software, Inc.