Software And Copyright Essay, Research Paper

Software and copyright

Current copright and patent laws are inapropriate for computer software; their imposition slows down software development and reduces competition. From the first computer as we know them, the ENIAC, computer software has become more and more important. From thousands of bytes on miles of paper to millions of bytes on a thin piece of tin foilsandwitched between two pieces of plastic, software has played an important part in the world. Computers have most likely played an important role in all our lives, from making math easier with calculators, to having money on the go with ATM machines. However, with all the help that has been given to us, we haven t done anything for software and the people who write it. Software by nature is completely defenseless, as it is more or less simply intellectual property, and not a physical thing, thus very easily copied. Copied software does not make money for its creators, and thus they charge more for whats not copied, and the whole industry inflates.

There are two categories of intellectual property. The first one is composed of writing, music, and films,which are covered by copyright. Inventions and innovations are covered by patent. These two categories have covered for years many kinds of work with little or no conflict. Unfortunately, it is not that easy when dealing with such a complex matter as computer software. When something is typed on a computer, it is considered writting, as it is all written words and numbers. However, when executed by the computer, it functions like an invention, performing a specific task as instructed by the user.

Thus, software falls into both categories (Del Guercio 22-24). It is generally covered today by copyright laws, for most mass market software at least. More advanced software or programming techniques, however, can be patented, as they are neither obvious nor old. This results in many problems which I will go into later.

Copyrights last the lifetime of the author, plus 50 years, and can be renewed. Patents last only 17 years, but cannot be renewed. With technology advancing so quickly, it is not necessary to maintain the protection of the software for the length of the copyright, but also, it is sometimes necessary to renew them (Del Guercio 22-24), say, for a 10th sequel in a video game series or version 47.1 of Bob s Graphic Program. With copyrighted material, one is able to write software similiar to someone else s, so long as the programming code is their own, and not borrowed from the others (Del Guercio 22-24). This keeps the industry competitive, and thus results in better software (because everyone is greedy, and they don t want to fall behind). With patents no one is allowed to create software that performs a similar functions. Take AutoCAD and TrueSpace 2, two 3D modeling programs. TrueSpace 2 would be a violation of patent laws, as it performs a very close task to AutoCADs, which came first. Luckily for us, CAD programs are not new, they have been around for more than 10 years, and no one thought to patent them.

Thus, you can see the need for change in the system. The current laws regarding the protection of intellectual material cannot adequately protect software, they are either too weak or too strict. We need a new category of protection. The perfect protection law would most likely last for 10 years, renewable. This is long enough to protect a program for as long as it is still useful, and allows for sequels and new versions just in case. It would also have to allow for others to make similar software, keeping the industry competitive, but it would have to not allow copying of portions of other software (because you can t quote something from someone elses software like you can with a book). However, there are many who dispute this, and I can see their point. Current copyright laws have and will protect software effectively, it can be just as protected as other mediums (Cosgrove). This is true sometimes, however, to copy a book would take time. You would have to type up each page to make a copy of it, or at least photocopy or scan each page, and it would most likely take up much more time than its worth. To copy a computer program however, takes seconds.

Changing the law would take time and money, you might be saying. It would be a tremendous hassle in Congress to have a new law written just to cover that “Information Superhighway” thingy. Yes, that s true too, but to not change the laws will cost more. With the ability to patent new and non-obvious software functions comes serious problems. The latest new technology, be it ray-tracing 3D engines, anti-aliasing software, or a new internet exploring fad can be patented. This would mean that only one company and its software could use it. Any other companies that wanted to use the software would have to pay them a large sum of money for the rights. Also, since patent hearings are conducted over a period of 3 years, and in secrecy, company a might create a software package and then apply for a patent, and company b may create better software during that period, and might become quite sucessful, and then bam, the patent is given to the company a , who prompty sues the pants off company b . This stagnates the computer industry; it used to be that company a would retaliate by making better software (Del Guercio 22-24).

For example, Lotus software. They used to make data organization software. Up until I did this report, I thought they had gone out of business, because I hadn t heard about anything new being done by them. Well, while I was researching, I found the appalling truth. When patenting of software became acceptable in the early 90 s, they closed up their R&D departments and called in a bunch of lawyers to get them patents on all their programming techniques (Del Guercio 22-24). Ever since then, they ve been selling out the rights as their primarily (and I m willing to bet, only) business.

This could even be taken to the extremes of actually patenting simple methods of handling data, such as say, mouse support. Now, it can t happen to mouse support as it is today, but in the future, something undoubtably will replace the mouse as the preferred method of input, for instance, in what may be a virtual reality future, the glove might be the input device. Anyway, say it did happen to mouse support. Every single program that uses mouse support would have to pay a fee for the rights to do so. This would result in higher software prices (aren t they high enough?), and reduced quality in the programs, as they have to worry about the legalities more (Del Guercio 22-24). Needless to say, the patenting of software is not a widely loved policy, mostly embraced by large corporations like Lotus and Microsoft (Tysver “Software Patents”). Smaller companies and most often consumers are generally against it.

Even with all the legal problems I ve mentioned that arise with current laws, thats not all. The complexity of software protection laws brings up a large degree of confusion. I myself thought that copyrights lasted 7 years until I read this. I asked 15 people in a chat room on the Internet what they knew about software protection laws, and only one of them knew that software could be patented. 12 of them thought that it cost lots of money for a copyright, which it doesn t. It s $20 for a copyright at most, and $10000 at most for a patent. 5 of them thought that software copyrights lasted 7 years (hey, it s a popular misconception, I thought so myself at one point). And last but not least, 10 of them believed that there was no laws regarding the copying of software (there are, but they re virtually ineffective).

Now that you know all about the legal and business aspects of software protection, lets take a look at how it can affect you. Say you ve got a web page, and you ve got a link on your web page to your friend Bob s web page, and he s got a link on his page to “Joe S LeeT PiRaCY aND WaReZ”, and on that site, there is a link to a pirated copy of AutoCAD. Then Joe gets busted. Joe will almost certainly be in trouble, Bob will likely be either questioned or considered responsible, depending on the blatancy of the link, and YOU will likely be questioned and your page might be monitored for a time (Bilodeau). One such example is my web page. I had a link from my page (the Wierd Wide Web) to Archaic Ruins, which is a site regarding information on emulators of old video game systems. When the operator of Archiac Ruins got sued by a video game company (I think it was Konami), I too got questioned, and had my page had ANY questionable material on it, I would have been sued. Thankfully, I was too lazy to work on the page, as I had planned to put up a page that had really old videogames. Who said procrastination was bad?

How can you prosecute someone for a crime that is undefined? Thats a question many people are asking. What is a copy of software? Is it a physical clone of the media it came on? Or is it the code duplicated to someplace else? If so, where else? Currently, software copying is generally considered a copy of the code someplace else… but thats a problem. We all know that a backup of software is a copy, but did you know that even running the software creates a copy of it? Yes, it does.

When you load a program, it goes into your computers memory, and is legally considered a copy. While the copy does not stay indefinately, it does stay long enough to perform a certain task, and can and has been looked upon as a form of software piracy, as stupid as that sounds. (Tysver “Software Patents”)

BBS (Bulletin Board Systems, small online services run by normal people) Sysops (system operators) are legally considered responsible for all the files that are available on their system (Elkin-Koren). While at first this seems like an obvious thing, afterall, it is their computer, they should know whats on it. However, if you had ever run a BBS before, which I do, you d know that its hard, if not impossible to know whats on your computer. Planet-X, my friend John Morse s BBS, which I co-run, has 50 calls a day. Of those 50 calls, about 35 of them upload or download software. Neither one of us is constantly monitoring the system, nor is there a way to make the computer automatically check to see what happens. Thus, about half of the public files on the BBS we don t know about.

Lets take a look at an example of BBSs and copyright, and how they oh-so-beautifully coincide. Sega Ltd., maker of the Sega Genesis and Sega Gamegear, recently sued the Maphia BBS for making Sega Genesis ROMs publically available in a download section. This section was a type of “digital rental” as it is commonly known in the BBS community. Commercial software publically available for download, on an on-your-honor system, you had to delete the files after a short period of time (24-48 hours).

Unfortunately for the Maphia BBS, they did not have a disclaimer, stating that the files must be deleted after a trial period, and thus, Sega was able to sue them for it, as without the disclaimer, there was no proof that they had used the “digital rental” system, and thus it was not fair use, as it could be used for monetary gain by the downloader (not having to buy the game). Of course, it could be used for that purpose WITH the disclaimer, but the disclaimer does just that, disclaims the BBS operator of the responsibilities of that copy of software (Elkin-Koren). Another such case was the case between Playboy (I think we all know who that is), and the Frena BBS. The public file areas on the Frena BBS frequently contained image files, and more often than not, they were adult image files. Well, I don t know exactly how it happened, but Playboy somehow found out that this BBS had some scanned photos from a Playboy magazine, and because they have the copyright to all their photos, they were able to sue the operator of the Frena BBS. The operator had no idea that there were any Playboy images on his system (Elkin-Koren).

Speaking of image files, they too can be a problem with software protection. Say you ve got an image file that someone had copyrighted. You load it up in a photo-retouching program, and add a big old goat in the background and paint the sky red. Then you remove the artists file name. Viola, the picture is now semi-legally copyrighted to you, as it has been significantly changed from its original, although

I wouldn t recommend going to court over it (Grant 12). All you have to do is change a very large portion of the image files coding. Technically, darkening or blurring the image, changing the file format, or interlacing the file changes the file entirely, and thus, its yours. Sounds too easy? It is.

Copyrights and patents are designed to help the media it protects. But in the case of technology, its actually hindering it. CD-ROMs contain a lot of information, and are the perfect media for music. A lesser known media, the Digital Video Disc, or DVD, is much more versitile, containing 26 times the storage compacity of a CD-ROM, and 11500 times more than a standard floppy disk, or about 17 gigabytes (the largest hard drives are 9 gigs). However, DVDs are not available to the public. Why? Because of the ease of copying them. We ve all dubbed tapes, its easy to do. However, we often opt for higher quality originals, because there is always a bit of degradation in the copies (although its very small now). With DVDs, a copy is exactly that, a copy. No degradation, no reason to buy an original.

All the big companies are really scared by this technology, because it will take another five bucks out of their pockets. DVDs would be one of the greatest advancements in the short history of computers, but because of the shadier uses it could be used for, we ll never see it. I like to compare it to the Internet, its very useful, but it can be used for illegal purposes. You be the judge (Ross 134-140).

Luckily, we may yet someday see DVDs, because several companies are developing copy protection schemes for them, to stop the casual home hacker/copier. Macrovision, for instance, is producing hardware for the DVD player that will make them incompatible with VCRs (the easiest dubbing-to platform, the equivilant of CD to audio tape). It will send output through the audio/video out ports that when played on a TV, will appear normal, but when played through a VCR, will have color stripes running sideways across the screen. This is due to the differences between the ways the two work (Ross 134-140).

So as you can see, current methods of protecting software are a hinderance on the software industry. The problems outweigh the benefits, but with a new law, the industry would be able to keep the benefits and minimize any drawbacks. Instead of having to nitpick over who wrote something that did something similar, it would be back to who wrote something more powerful than the other guy, and that s what makes the industry great, competition. Oh, and I d like to add that I broke copyright law a total of 13 times in the making of this report, when I made a copy of each reference with the school copying machine (James 16), although it was fair use, so I m not in any trouble (Ruth).

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