Cyberlaw for Software Companies

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Table of Contents

1 Introduction

As technology continues to advance in the 21st century, legal experts have been struggling to keep up with the ever-changing field of law in an online world. Cyber law can be defined as internet or digital law, and "refers to the body of legal principles, regulations, and jurisprudence governing activities conducted in cyberspace" (Babikian, 2023). A vast majority of companies today maintain some sort of app, website, or database. As a software company, how can you protect against liability, maintain regulatory compliance, and secure/protect intellectual property rights? As a software company, having a strong terms of use agreement is critical to protect from liability. Additionally, a software company that operates a website or application that stores any personal data, whether it be cookies on a website, name and address, or credit card information has an ethical and usually legal standpoint to protect that information and must follow all regulatory compliance rules that apply. Intellectual property is also under attack in this digital age and proper protection needs to be applied to safeguard your company's ideas. This report will cover emerging issues in the realm of Cyberlaw, analyze past legal cases concerning Cyberlaw, and recommend actions that software companies can implement to protect themselves in this digital age.

2 Terms of Use Agreements

It is almost impossible to go a single day without interacting with some type of terms of use or user agreement. A few other synonyms you may see are end user license agreement or EULA, terms of service or TOS, terms of use or TOU, and member agreement (Goldman, 2012). Interestingly enough, there is no legal or regulatory requirement to have a user agreement, but there are quite a few reasons why it is so important (Crail & Haskins, 2022). Despite the lack of legal and regulatory requirements, almost every app, website, and software program should have

some type of terms of use agreement, and as a software company, there is a 100% chance you will need one. There are two main types of terms of use agreements, clickwrap and browsewrap. As far as websites go, which every software company will most likely have, the most common type of agreement is the browsewrap agreement in which by simply browsing the site you are agreeing to the terms of use (Crail & Haskins, 2022). Browsewrap agreements are very weak by nature since most users will never actually see or read the terms of use and may not even know they exist. In contrast, clickwrap agreements are much stronger to defend as they usually come in the form of a pop-up or landing page which physically requires the user to click or accept the terms of use, whether or not they actually read it (Crail & Haskins, 2022).

Terms of use agreements can vary depending on what the agreement applies to, but they usually contain a set of rules defining how you are to interact with the website/app/software, including limitation of liability, a privacy policy, intellectual property clauses, and of course a disclaimer that the terms of use are subject to change (Crail & Haskins, 2022). Limiting liability is one of the most important parts of a terms of use agreement, this section is used to protect the company from liability due to errors and to limit liability from user-submitted content (Crail & Haskins, 2022). In the case of Zappos, which will be covered in FIRAC 3, a simple browsewrap agreement was not enough. Back in 2012, Zappos was subject to a massive data breach and many of its users wanted to sue Zappos for damages, but Zappos claimed that they could not and instead had to go through arbitration due to an arbitration clause they had in their terms of use agreement (Goldman, 2012). At the end of this paper, terms of use best practices will be discussed and there are a few important lessons learned from the Zappos case that can be used to strengthen your agreements.

3 Regulatory Compliance

Regulatory compliance has increased dramatically since data has been converted to digital formats and it is a critical piece of the ongoing fight to maintain data privacy and security. In the US, we have quite a few overlapping data protection laws, some of which are at a federal level, state level, and some which just apply to certain sectors. A few examples of the legislature that could affect software companies would be the FTC Act, which helps protect consumers against unfair or deceptive practices by businesses which can include misuse of personal data, COPPA, the Children's Online Privacy Protection Act, HIPPA, The Health Information Portability and Accountability Act, (Pittman et al., 2023). While not a law, PCI-DSS, the Payment Card Industry Data Security Standard is a globally recognized standard that applies to any company that processes, stores, or transmits credit card data (Pittman et al., 2023).

PII or personally identifiable information is any information that can be used to unveil someone's identity, such as name, address, phone number, or social security number (IBM, 2024). Storing any data of this sort means you must protect it at all costs from malicious actors which is why standards and laws have been created to do so. While the FTC, COPPA, and HIPPA only apply to the U.S., Europe conveniently has a single law, the General Data Protection Regulation, that provides an overarching requirement to ensure data transparency, accountability, and compliance with privacy data privacy principles (Babikian, 2023). The Payment Card Industry Data Security Standard or PCI-DSS, is a globally accepted set of policies and procedures to provide security to credit, debit, and cash card transactions and to protect cardholders' personal information (Barney, 2023). This standard, created in 2004 by the five major credit card companies, was designed to prevent cybersecurity breaches of personal information and to reduce the risk of fraud for organizations that handle payment card

information (Barney, 2023). As it stands, following the GDRP and PCI-DSS standards is generally regarded as mandatory and it is evident why, it is the best way to protect the PII that your company stores.

A company operating in the EU, regardless of where they are based, would be required to follow GDPR data standards, while in the US it could depend on your state or business sector. The reason these laws and regulations are so important is that they give consumers power over their data and ensure that no company or organization can collect or distribute it without their consent. At the same time, this regulation also helps consumers if they ever want their data removed or deleted from a certain database, and that they have the option to do so. A significant ethical and legal obligation is owed to following these governing regulations and ensuring that in addition, you are implementing additional cybersecurity measures like a cybersecurity incident response framework such as the National Institute of Standards and Technology (NIST) or ISO/IEC 27000 frameworks, conducting risk assessments, and following the requirements for incident transparency and data breach notification laws (Babikian, 2023). These laws, regulations, and guidelines exist for a reason and are critical for any software company and not following them could result in disastrous consequences.

4 Patent or Copyright for Software

Software companies are presented with a choice when it comes to protecting their inventions, do they acquire a patent or a copyright? On one hand, there is copyright law, which according to the United States Copyright Office is a form of protection that legally covers unpublished and published original works in a tangible medium (Villacreses, 2023). The subject matter of the copyright must also be original, created by a human, and possess a minimum amount of creativity, meaning it must be different enough from something else already existing

to qualify for a copyright. Some examples of copyrightable software include unique source code, object code, scripts, APIs, and GUIs (Villacreses, 2023). Software-related examples that do not qualify as copyrightable would include computer or artificial intelligence created code created without any human input (Villacreses, 2023). As we will explore in FIRAC 2, while the unique source code of a software program can be copyrighted, the menu structure of said program may not qualify as such. One advantage of copyright law is that as soon as you meet the minimum requirements to secure a copyright, it is yours and does not require any formal registration with the US Copyright Office, the exception is when it comes to enforcement, where you can simply register for a copyright with a small fee (Villacreses, 2023).

Patents are on a completely different level than copyrights when it comes to protecting software. Patents are much harder to qualify for, take much longer to receive, and can cost quite a lot of money. Patents and copyrights can be used in conjunction, but it depends on the subject matter, for inventions to be patentable they need to be novel, non-obvious, and useful for utility patents, and for a design patent, need to be different enough from anything else that already exists (Villacreses, 2023). Not even considering the years it could take to get a patent and the tens of thousands of dollars it could cost, patents are only enforceable for up to 20 years usually, while copyrights are enforceable for the life of the author plus 70 years after death (Villacreses, 2023). Patents for software-based inventions should only be considered if the software is truly unconventional and inventive, otherwise a simple copyright should suffice (Villacreses, 2023). For most software companies, anything with unique code can be easily copyrighted but not so much patented, which makes it seem like the logical choice, but patents still have a place in certain scenarios, such as the one that will be discussed in FIRAC 1.

5 FIRAC Analysis

5.1 FIRAC 1: Trustees of Columbia University v. NortonLifeLock Inc.

Facts

Colombia University first issued and then amended a complaint against NortonLifeLock Inc. in 2013 alleging that their Norton Antivirus software infringed on six patents that Columbia owned, as a matter of federal law. These patents were regarding intrusion detection systems that Columbia developed to detect malicious email attachments, operating system intrusions, and anomalous program executions. They also filed for three state law claims for relief due to unjust enrichment, fraudulent concealment, and conversion. Dating back to 2004, Norton and Columbia had worked together on certain software elements under an NDA. The bulk of the trial was focused on the infringement of two specific patents and whether Norton concealed and fraudulently filed a patent for technology not developed by them.

Issue

1. Did Norton infringe on any of Columbia's patents?
2. Did Norton fraudulently file a patent for Columbia's technology?

Rule

Title 35 of the United States Code, sections 101, 102, 103, and 122 are frequently referenced as to whether the issues are true.

Analysis

The court used the doctrine of equivalence to determine whether the patent was infringed upon or not. Norton raised multiple estoppel arguments during the process to try and stop the use of the doctrine of equivalence.

Conclusion

This was a welcomed victory for Columbia University after almost a decade of lawsuits and a 2-week trial in 2022, the jury unanimously agreed to award Columbia $185 million because of Gen Digital Inc.'s (formerly NortonLifeLock) willful patent infringement. In September of 2023, a federal judge in Virginia ruled that since Norton willfully infringed on Columbia patents, they must now pay $481 million in damages, 2.6 times the original verdict, and ordered Norton to pay for Columbia's legal fees related to the case.

5.2 FIRAC 2: Lotus Development Corp. v. Borland International

Facts

Lotus is a software company that developed the computer spreadsheet program named Lotus 1-2-3. In the program, they implemented 469 total commands, such as Copy, Print, Quit, etc. as well as an option to record custom macros. Borland is also a software company and released a similar spreadsheet program after Lotus named Quattro. It was discovered that Borland imitated Lotus's 1-2-3 menus in its own program in an almost identical style but did not copy the exact code for Lotus users to be able to easily switch to a competitor product.

Issue

1. Is a computer program menu structure copyrightable?
2. Did Borland infringe on Lotus 1-2-3's copyright?

Rule

The court used section 102(b) of the Copyright Act of 1976 to decide on the first issue, which would then answer the second. The court also used the Supreme Court precedent of Feist Publication, Inc. v. Rural Telephone Service Co to see if the plaintiff can prove ownership of a valid copyright and that original elements or their copyright were copied.

Analysis

The United States District Court for the District of Massachusetts originally ruled that the menu command hierarchy of Lotus 1-2-3 was copyrightable, and that Borland had infringed on Lotus's copyright. Borland appealed the decision to the United States Court of Appeals for First Circuit which court found that according to section 102(b) of the Copyright Act of 1976, the menu command structure is classified as a "method of operation" and thus not protected under copyright law. The First Circuit's court reversed the decision of the district court and stated that Borland did not infringe on Lotus's copyright since the menu structure is uncopyrightable, and the Supreme Court affirmed that decision.

Conclusion

After a short initial victory in district court, Lotus ended up losing the copyright claim against Borland as they appealed and the First Circuit and Supreme Court agreed that the Lotus 1-2-3 menu hierarchy is uncopyrightable and that Borland did not violate any laws, per the Copyright Act of 1976.

5.3 FIRAC 3: In re Zappos.com, Inc., Customer Data Sec. Beach Litig.

Facts

In January 2012, Zappos.com was attacked and a malicious actor was able to steal files containing the names and addresses of customers resulting in a serious security breach. When Zappos notified the affected customers, some of them decided to seek damages because of the breach and filed suits in federal courts throughout the country. Over ten of these cases ended up in the District Court of Nevada. Zappos has a browsewrap terms of use agreement on their site that also includes an arbitration clause, which means these lawsuits would technically not be valid.

Issues

1. Was the Zappos terms of use arbitration agreement a valid contract?

Rule

The Federal Arbitration Act, United States Code Title 9, was used to state that arbitration is not required when parties have not agreed to it and that it is a matter of contract. The court also used Van Tassell, 795 F.Supp.2d at 791 (citing Specht, 306 F.3d at 32) to decide whether there was reasonable notice of the terms of the contract as evidence of the agreement.

Analysis

Federal courts have already clearly defined Zappos' terms of use as a browsewrap agreement and without any proof that the plaintiffs ever clicked on it, read it, or even knew it existed, there can be no agreement to arbitration and therefore no contract. The court also referenced existing case law concerning terms of use clauses that have unilateral change clauses in them and declared the contract illusory and unenforceable. Zappos tried to use equitable estoppel to argue that the plaintiffs cannot claim a breach of contract while simultaneously trying to avoid arbitration. The court declined to apply equitable estoppel since the plaintiff's breach of contract claims do not rely on the terms of use but simply other guarantees that were stated on the website.

Conclusion

The court concluded that the arbitration clause was invalid since it was never agreed to by both parties, therefore no acceptance. Since there is no proof of the users accepting the terms, there is no contract and nothing to force them into arbitration. Even if it was considered a contract, it would be illusory since they included the unilateral change clause.

5.4 FIRAC Explanation

As shown in the first example, even after going through the lengthy and costly process to receive a patent, it still may need to be defended in court, but having a patent or copyright on your software is better than having nothing at all. Patent law and copyright laws can be utilized by anyone or any organization in the U.S. seeking to protect their software or ideas from being used without permission. As shown in the second example, for a company that produces software that needs to be copyrighted and/or patented, it is important to understand what can be legally copyrighted and/or patented, so you do not run into an issue like Lotus v. Borland. The third case analysis shows how important it is to have what the courts consider to be a legally binding terms-of-use agreement. Having an agreement in place that users never actually see, or having a unilateral change clause, can leave your company legally exposed which defeats the purpose of having the terms in the first place. By utilizing patents, copyrights, and terms of use agreements properly, you can prevent your software company from having unneeded cyber liability.

6 Code of Ethics

Software companies should implement a code of ethics to promote ethical coding and business practices and protect the company from liability. When it comes to software development, it may be common to be rushed when trying to meet deadlines to sell products which may lead to cut corners and compromise privacy and security (West, 2018). Silicon Valley which is the home of software start-ups developed a “build it first, ask for forgiveness later” mentality that doesn’t quite equate with ethical practices, only trying to be first to market (West, 2018). The most effective way to maintain transparency in an organization is to implement an internal code of ethics, some use the baseline of the Scrum agile framework’s five values of commitment, courage, focus, openness, and respect (West, 2018).

7 Terms of Use Best Practices

As shown by the previous Terms of Use section and FIRAC analysis, having a proper terms of use agreement is paramount for any software company that has a website, mobile app, or computer program. As the courts have shown, browsewrap agreements are not sufficient, and unilateral change clauses do not hold up when challenged. Zappos, besides failing the legal requirement of a terms and conditions agreement, failed the ethics test as well. Maybe some people will read them and maybe some people won't, but hiding your terms and conditions like Zappos and other companies do makes you wonder what they are trying to have you agree to without even seeing. Being ethical in creating your terms of use agreement means you should be transparent in what you are requiring of the user, keeping it regularly updated, not hiding it, and including a privacy policy as well (Olsen, 2022).

8 Conclusion

Cyberlaw, being a relatively new field, has legal experts and companies constantly making sure they are up to date with all current laws, regulations, standards, and best practices. As a software company, we have reviewed past legal cases and learned what to do and not do as it concerns patents, copyrights, and terms of use agreements. It has never been more important to protect against legal liability by maintaining regulatory compliance and protecting intellectual property rights. Also, by creating and maintaining a code of ethics and appropriate terms of use agreement for your app website or software program, you can achieve ethical, and legal transparency as other companies in the 21st century.

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