LOST IN THE CLOUD: The Implications of Cloud Computing for Trade Secret Protection

INTRODUCTION

The computer industry and media are all abuzz about cloud computing. Apparently first coined as a term for the next generation of computer services in 2005, cloud computing services are now being offered by all of the big names in computing and the Internet – including Microsoft, Google, Amazon, and Dell – as well as by many smaller and start-up enterprises. Commenting on the rush to offer cloud computing services, Larry Ellison observed:

> The interesting thing about cloud computing is that we've redefined cloud computing to include everything that we already do. I can't think of anything that isn't cloud computing with all of these announcements. The computer industry is the only industry that is more fashion-driven than women's fashion. Maybe I'm an idiot, but I have no idea what anyone is talking about. What is it? It's complete gibberish. It's insane. When is this idiocy going to stop?

As with all new developments in the computer industry, what "cloud computing" actually means is subject to debate and it will likely take years for a precise definition to emerge. Some people define it very broadly to include a range of computer services that are available over the Internet; also known as Software as a Service (or SaaS). As explained by HP:

> Cloud computing represents an entirely new value to consumers and large organizations. It offers a way for your organization to access highly scalable and flexible services over the Internet via a usage-based business model.

Sometimes the term is used to refer only to services that allow for the remote storage of information and documents. The focus of this article is on the narrower meaning of cloud computing; that is, services that offer the ability to store documents and data remotely (hereinafter "cloud storage services" but also known as online storage services).

According to the providers of cloud storage services, businesses around the world can reduce the costs of acquiring and maintaining their computer systems by storing their documents and data in the cloud. Instead of having to maintain an expensive collection of centralized servers, businesses can utilize the server capacity of a third party that promises to be available 24/7 and to provide "scalable" capacity for all of its clients' needs. As Amazon's Jeffrey Bezos put it, "[w]e make muck so you don't have to." An added benefit of these services is that the stored information can be retrieved anywhere in the world via the Internet, thereby facilitating the use and sharing of information among multiple persons. What these services do not typically promise, is that the information that is stored on their servers will be maintained in confidence. In fact, in order to limit their potential liability, the terms of service agreements used by most cloud storage services disclaim responsibility for the security of information stored by their customers. This raises the question: What if information stored in the cloud constitutes trade secrets? To what extent does the use of a cloud storage service undermine the trade secrecy of remotely stored information?

All businesses have information that they want to keep secret. However, in order to maintain information as a trade secret, applicable law requires that they "engage in efforts that are reasonable under the circumstances to maintain the secrecy of the information." What constitutes reasonable efforts depends upon the circumstances. Of particular import are the nature of the relationship between the putative trade secret owner and the persons to whom the trade secrets are disclosed and the type of security measures that are used in an effort to maintain the confidentiality. This article uses the circumstances of cloud storage to examine the reasonable efforts requirement of trade secret law as it relates to the disclosure of trade secrets to third parties.

The analysis begins in Section I with a general explanation of the requirements for trade secret protection and the purpose of the reasonable efforts requirement. It then examines the reasonable efforts requirement as applied to customers of cloud storage services in three parts. First, in section II, the nature of the relationship that exists between a cloud storage provider and its customers is examined to determine if there is an express or implied duty of confidentiality. Second, Section III examines the meaning of voluntary disclosure under trade secret law. Because cloud storage services typically disclaim responsibility for the security and confidentiality of information that is stored in the cloud, arguably the only way trade secrets could continue to be protected is if the act of storing information in the cloud is not considered a disclosure. Third, in Section IV, the availability of technical means to maintain secrecy is examined with an eye toward identifying the level of security that will be deemed reasonable in the cloud.

As the foregoing suggests, it may be difficult for cloud storage customers to assert trade secret protection for information stored in the cloud. To the extent they are successful in asserting such claims a related question is whether a cloud storage service can be held liable for failing to maintain the secrecy of such information. This issue is explored in Section V and involves the issue of indirect misappropriation; that is, the extent to which a cloud storage service can be held liable for another's misappropriation of stored information.

OUTLINE of Lost in the Cloud: The Implications of Cloud Computing for Trade Secret Protection

Introduction

I. The Reasonable Efforts Requirement of Trade Secret Law

- **A. Origins, theories, purposes and functions of the requirement**
- **B. Meaning and application of the requirement**

II. The Relationship between Cloud Storage Services and their Customers

- **A. The role of the duty of confidentiality in trade secret law**
- **B. Relationships giving rise to a duty of confidentiality**
- **C. Implied-in-fact and implied at law duties**
- **D. What the terms of service agreements say on the subject and the effect of express disclaimers**

III. Voluntary Disclosure and the Loss of Trade Secrets; or the Difference between Actual Secrecy and Trade Secrecy

- **A. What constitutes public disclosure under trade secret law?**
- **B. The difference between actual secrecy and trade secrecy.**
- **C. Is cloud storage a disclosure of information or a mere transfer without disclosure?**

IV. What Security Is Reasonable in the Cloud?

- **A. Reasonable compared to what? Should reasonableness be judged based upon the nature and extent of available security measures?**
- **B. Levels of security for data stored in digital form**
- **C. Is it reasonable to rely upon other's compliance with the law? (e.g., if it is illegal to hack into computers, is it reasonable for a trade secret owner to assume that no hacking will occur?)**

V. Can Cloud Service Providers be Held Liable for Failing to Protect Trade Secrets?

- **A. Third-party liability under trade secret law**
- **B. The effect and limits of contractual provisions limiting liability**
- **C. CDA section 230**

Conclusion