

Cloud computing is not a single technology, but rather a type of product that combines software applications, servers and networks in order to run complex software applications from a central location and allow client users to access those applications over a network (usually the internet) from anywhere. The chief advantages of Cloud Computing is that, first, clients don't have to install the application on their own networks, which enables them to outsource their IT to the cloud service provider and; second, clients can access their data from anywhere as long as they have an internet connection.

While the basic concept of Cloud Computing has been around for a long time, only recently have companies begun offering consumer-facing products and services with huge economic potential. Various flavors of Cloud Computing, described as Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS) or some other variation on the "X"aaS theme may be seen.

As with all fast-emerging technological concepts, Cloud Computing generates considerable uncertainty and risk with respect to intellectual property (IP) rights, particularly patents. As an internet-based technology, Cloud Computing has attracted the attention of patent trolls, who are finding a whole new group of service providers and clients to target in expensive IP litigation.

Risk managers and their advisors should review the features of the Cloud Computing services they either provide or utilize and identify the elements of those services that constitute a hazard for patent litigation. Some areas of concern are:

Security- Cloud Computing requires secure communication between the client and the service provider. This means the service provider needs to create or use encryption techniques, secure login

protocols, hashing algorithms and more, all of which are frequent subjects of patent litigation.

Distributed computing- File and data storage, number crunching and transmission of data which is typically handled by servers distributed physically around the world. Accordingly, a great deal of effort is put toward ensuring that the data is in sync and excessively available. The methods and algorithms used to accomplish this are often patentable.

User Interface- Because of the client-server nature of Cloud Computing, clients of Cloud services have placed a premium on a high quality user experience. As a result, service providers have pushed the envelope with their user interface, content caching techniques and information architecture.

Content Watermarking- Methods to digitally tag files or data in order to identify its source are collectively called 'watermarking.' The complex algorithms used to accomplish this have been the subject of frequent IP litigation since mid-2012.

It is important to remember if a cloud service provider falls within the sites of a patent troll, both the service provider and its clients can be easily accused of patent infringement. Risk advisors should point out that merely using a patented method may constitute infringement. The IP Defense Insurance policy can be the solution for service providers and their clients to ensure the funds are in place to support indemnification language in service agreements. It is important for risk advisors to carefully review all indemnification agreements between so the client is able to help clarify who bears the financial risk for Cloud Computing services.