**The Continuous Disclosure Doctrine:**

**Patent Law and Competition in the Age of Big Data**

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**Abstract**

Today’s ever-changing technological landscape presents numerous challenges to the law, frequently involving issues lawmakers did not consider prior to formulating legislation. This article addresses the particular challenges posed to patent law, especially its disclosure requirement, by the major role played by big data, with its immense scientific and commercial value, in the current emerging technological and innovation environment. The disclosure requirement is a core feature of the patent system, designed to make full knowledge about a patented invention publicly accessible. This goal is successfully met in the context of classical or traditional technologies, such as mechanical or concrete inventions. However, in the case of big-data-based inventions, which require big data in order to be properly understand and utilized, it has proven difficult to achieve full disclosure for patent purposes. The resulting partial disclosure limits the capacity of non-patentees to understand and exploit the invention adequately, even after the patent expires. The reasons for partial disclosure involving big-data-based inventions are rooted in the temporal and static structural features of the disclosure requirement. After discussing these structural features, this article analyzes the ramifications of inadequate disclosure on the dynamics between patent law and competition. One major problem that arises is that partial disclosure enables patentees to engage in monopolistic practices that exceed the appropriate monopolistic boundaries of a patent. Thus, partial disclosure can undermine the operation of the free market, even when the patent has expired or been invalidated. To resolve the current incompatibility between patent law and big-data-based inventions, this article proposes a novel continuous disclosure doctrine requiring the disclosure of all knowledge required to utilize an invention, regardless of when the patentee reveals such knowledge, so long as the patent is still valid.