



FENWICK & WEST LLP

Method Madness

Patenting Financial Inventions After 'State Street Bank'

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In July 1998, the U.S. Court of Appeals for the Federal Circuit, in *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), held patentable Signature's mutual-fund system, overturning a legalistic framework for patentable inventions based on whether the invention contained mathematical algorithms. The court also wrote the final obituary for the defunct "methods of doing business" exception to patentable inventions.

A media firestorm erupted. Suddenly, everything on the Internet, and every business method, model or transaction, was about to be patented by a wily startup or an industry-dominating multinational. While many commentators analyzed the *State Street* decision in detail, few gave detailed guidance about how to protect financial inventions.

The reality of the situation is this: First, *State Street* marks the culmination of a predictable evolution of the law defining what inventions are patentable. Second, public perception of the decision and the new awareness of potentially patentable ideas will drive new attempts to "patent everything," including true business methods, financial instruments and transactions. Finally, all types of companies, particularly those that would not traditionally have considered patents, should now do so and look for inventions in whatever products, services or internal tools give them a competitive advantage.

After *State Street*, the touchstone of a patentable invention is the transformation of intangible or tangible material that yields a practical and useful result. One form of "intangibles" is information, and money is a type of information. The *State Street* court stated that systems and processes that "transform" information about money are patentable inventions. An unpatentable "abstract idea" lacks any useful transformation of data.

Whether or not such systems perform purely business or financial functions, or manipulate mere "numbers," is

irrelevant. "Anything under the sun that is made by man" is patentable, according to the Supreme Court (*Diamond v. Chakrabarty*, 477 U.S. 303 (1980)), and financial inventions certainly don't exist in nature.

There was no dearth of software and financial invention patents before *State Street*. Software patents have been granted since at least the early 1960s, with 6,000 to 10,000 software patents having issued in each of the last five years. Patents for financial inventions number in the tens of thousands. Nevertheless, the perception that Internet, software and business-method patents are now easier to obtain has led to a sharp increase in applications.

A financial invention is patentable, as long as it is a process, machine or article of manufacture that has a practical application, evidenced by the transformation of financial or other data. A key problem in patenting financial inventions will be in describing and claiming the invention in enough specificity to avoid the invention being held an unpatentable "abstract idea" without being so narrow as to enable competitors to avoid infringement by varying from the implementation details but not the concept.

Companies should consider protection for the following loosely defined categories of inventions.

- Financial document inventions are documents used to create a financial or business relationship. There are hundreds of early patents for accounting books, sales-order forms, lottery tickets, coupons, checks, traveler's checks and the like.

For example, Patent No. 3,950,015 for a "Negotiable Instrument" (1973) covers the use of preprinted traveler's checks in combination with separate identification certificates to authenticate the check writer to the recipient. Twenty-three years later, Patent No. 5,863,073 on "Refundable Travellers (sic) Cheques" (1996) provides for

replacement or reimbursement of lost or stolen traveler's checks by using a second "replacement document" with a replacement code matching the serial number of the check.

Companies should look for this type of invention in new forms or combinations of documents that provide conventional functions but in a manner that creates a new type of transactional feature or improves an existing one. The claims should define the logical or physical structure of information presentation or information capture on the document and relate that structure to the performance of a transaction. Claims should be written for both the document(s) and a process of effecting a transaction with the document(s).

- Financial instrument or financial relationship inventions typically describe a relationship between various parties, such as a financial institution and a consumer. Banking, brokerage, loan or other types of accounts or relationships are all suitable subjects for patent protection. A well-known example is Merrill Lynch's Patent No. 4,346,442 on its "Cash Management Account" (1982). Beneficial Management's Patent No. 4,890,228 on its "Refund Anticipation Loan" (1989) provides a short-term loan to a taxpayer to be repaid from the taxpayer's anticipated tax refund. This also qualifies as a business model patent.

Companies should look for this type of invention in new types of loans, mortgages, credit, real estate, sales, financing vehicles or other types of commercial transactions. If the new financial relationship is believed to distinguish a company from the competition, then the company should consider patent protection. For "instrument" inventions, the claims should identify the parties to the transaction and how the instrument affects the relationship between the parties. For "account" inventions, the claims should define the services or products that make up the account and how they relate to each other.

- Financial tools are computational tools or techniques for evaluating, predicting and identifying financial behaviors in various contexts. Examples include inventory management, account management, fraud detection, demand forecasting, risk analysis and securities-performance prediction. This type of invention takes some input set of data and extracts from it, or transforms it into, a desired output, which provides new information about the input domain.

For example, Patent No. 5,819,237 for a "System and Method for Determination of Incremental Value at Risk for Securities Trading" (1998) is the first patent on advanced techniques for "value-at-risk" analysis, an important risk-management tool for derivatives that uses computational insights to allow for real-time value-at-risk analysis of individual transactions.

Companies should look for this type of invention in any tool or process that provides predictive, evaluative or computational analysis of financial data. The claims should identify the types of input data necessary for the analysis, the essential process steps to transform the data and the specific output that is created. Since these tools are often sold as computer programs, claims for software products on computer-readable media should be included. System claims that describe the functional software components are useful when dealing with institutional users, who may run infringing tools on in-house computers.

- Significant press attention has been focused on business-model patents. Yet, even these are not new. Examples here include Patent No. 4,648,038 (1987), for a method of restructuring debt obligations; Patent No. 4,752,877 (1988), for a method of funding a future liability with an insurance plan; and, most recently, Patent No. 5,870,721 (1999), for a method of real-time loan approval. Many business-model patents have issued for advertising, lottery and auction-type inventions.

Claims for business-model inventions are typically process claims and should describe the behaviors or operations undertaken by the provider of the process. Transformation of some data type is essential and should be linked to the financial aspect of the model. Careful claim drafting is necessary to avoid an unintentionally narrow definition of "consumer," "merchant," "bank" and other terms that would unduly limit the claims. This is particularly so where the invention is independent of the product or market segment in which the invention originally arose.

- E-commerce inventions are typically directed to systems and methods that inherently use a computer and software to effect commercial transactions or relationships. Often, the intent of the invention is to support distributed transactions or relationships, without requiring the presence of both parties to the relationship to be physically near each other. Instead, the relationship and the essential aspects of the transaction are effected by the computer system.

Patents in this area are also not new. Long before Priceline.com's Patent No. 5,794,207 on a "reverse auction" (1990), there were many patents related to systems for transacting business by computers. One example is Patent No. 4,528,643 for a "System and Method for Reproducing Information in Material Objects at a Point of Sale Location" (1985), which describes a system for remote vending of data at "points of sale."