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Finance companies rush to patent business methods

Bradley Lytle and Philippe Signore examine how finance-related companies are obtaining and enforcing business method patents in the US, and explain why portfolios of such patents are becoming essential for many companies

While the European Commission is considering whether business methods are patentable subject matter, companies are busy obtaining and enforcing patents on business methods in the US. Whether they know it yet or not, finance-related companies, such as banks, brokerage firms, and insurance companies are especially affected by the recent surge in US business method patents. Companies that understand the power of exclusive legal rights are mining their businesses for inventions and are increasingly investing in business method patents that cover these inventions.

What is a “business method”?

No one really knows the definition of a business method under US law. The statute does not provide any useful insight, merely referring to methods “of doing or conduct-

ing business”. The Court of Appeals for the Federal Circuit (CAFC), which has exclusive appellate jurisdiction for patent cases, has not defined business methods. In its famous 1998 *State Street Bank* decision, the court ignored the definition issue and held that a business method should be treated (with respect to patentability) just like any other method.

Class 705 of the US patent classification is commonly referred to as the “business method” class, although many in the USPTO are careful to refer to it as the “computer implemented business method” class. The definition of class 705 includes “apparatus and corresponding methods for performing data processing operations ... wherein the apparatus or method is uniquely designed for or utilized in the practice, administration, or management of an enterprise, or in the processing of financial data”. Class 705

Table 1

Examples of large companies obtaining patents in class 705

Company	Estimated number of Class 705 patents issued
IBM	360
Pitney-Bowes	300
Hitachi	150
Fujitsu	150
NCR	130
AT&T	80
Microsoft	75
Matsushita Electric	70
Walker Digital	60
Citibank	50

The data was obtained from the USPTO website and reflects the number of patents assigned on their face to these companies since 1990, inclusive. The data does not include patents assigned to the companies post-issuance.

also includes apparatus and corresponding methods for determining a charge for goods or services.

On one hand, defining business methods as the subject matter of class 705 is practical and permits analysis of statistical trends. On the other hand, such a definition can be under-inclusive because certain patents covering business methods are not included in class 705 but are instead listed in other data-processing classes. For example, US patent number 6,157,823 directed to a method for managing pre-paid wireless communications is classified in classes 455 (telecommunications) and 379 (telephonic telecommunications), not class 705. Furthermore, such a definition can be over-inclusive because certain 705 patents do not claim business methods. For example, many 705 patents are directed to taximeters and postage meters, which resemble more conventional hardware devices than business methods (even the EPO grants patents on taximeters). The over-inclusiveness caveat can be lessened by considering specific subclasses of class 705. For instance, subclass 705/35, entitled “finance” and subclass 705/4, entitled “insurance” are particularly interesting to consider because they only include patents which are pertinent to the financial and insurance sectors, respectively.

Although the US patent classification has a class dedicated to computer-implemented business method patents, no one class is its mirror-image – namely the “non-computer-implemented business method class”. In part the USPTO may deny the need for such a class since it is disputed whether US law should recognize business methods that are performed manually (*In re Bowman*). Likewise,

Table 2

Examples of banks with patent portfolios

Banks	Total number of patents	Number of 705 patents
Citibank	81	54
Chase Manhattan	23	12
First USA	16	6
First Union/Wachovia	5	4
Capital One	4	3
Mellon Bank	3	3
Bank One	4	2
Bank of America	25	1
Wells Fargo	15	1

The data was obtained from the USPTO website and reflects the number of patents assigned on their face to these banks. The data does not include patents assigned to the banks post-issuance.

what is so special about method claims? There is a corresponding class devoted to patents that describe only “business systems”.

Recent developments

Prior to 1996, the USPTO explicitly and officially considered business methods as unpatentable subject matter. This prohibition, however, did not keep certain applicants from obtaining patents covering business methods and systems by carefully drafting their patent applications. For example, as early as 1982, Merrill Lynch received a patent directed to a system for processing and supervising subscriber accounts each including a margin brokerage account, a charge card and checks (US patent number 4,346,442). In 1983, the District Court for the District of Delaware held that the Merrill Lynch patent claimed patentable subject matter because it was directed to a computerized and “highly useful” method of doing business.

In 1996, the USPTO removed from its examination procedures its explicit exception to patentability for business methods. In 1998, the CAFC unequivocally stated in its *State Street Bank* decision that there never was a “business method exception” to patentability. The Court explained that if a method is directed to a “practical application,” the method is patentable regardless of whether it is a method of doing business. This decision fits into a coherent and well-developed jurisprudence, which relies on the same “practical application” test when considering the patentability of software-related inventions. In particular, this jurisprudence includes the 1981 Supreme Court *Diamond v Diehr* decision; the 1994 CAFC (en banc) *In re Allapat* decision; and the 1999 CAFC *AT&T v Excel* decision.

Certain groups, claiming to be surprised and worried by

Table 3

Examples of financial services companies with patent portfolios

Company	Total number of patents	Number of 705 patents
Visa	57	26
Merrill Lynch	34	24
American Express	39	11
Mastercard	15	12
Reuters	26	9
Cantor Fitzgerald	4	4
Freddie Mac	4	4
Met Life	16	3
Morgan Stanley	5	3
Hartford Ins	3	2
Nasdaq	3	2

The data was obtained from the USPTO website and reflects the number of patents assigned on their face to these companies. The data does not include patents assigned to the companies post-issuance.

the *State Street Bank* decision, lobbied Congress to overrule the decision, or at least to mitigate its impact. Congress obliged in 1999 by creating a new “prior inventor” defence to patent infringement. This anomalous defence, codified in 35 USC 273, applies only to methods “of doing or conducting business” and is considered to be relatively narrow. The courts have yet to address its applicability.

Starting in 1999, the USPTO experienced a huge surge in application filings related to business methods. The USPTO reports that for class 705, filings went from about 1300 in 1998, to about 2800 in 1999, to 7800 in 2000, and 8700 in 2001. Out of this explosion of applications, a few patents were issued with a questionable validity, in particular with respect to non-obviousness. For example, a Priceline.com patent, covering a method resembling a known reverse auction, and an Amazon.com patent, covering a “one-click” purchasing method, were targeted by sceptics. As a result, the USPTO was publicly criticized for performing poor examinations.

In 2000/2001, at the peak of the internet frenzy, two congressmen reacted to this highly visible issue and proposed legislation specifically targeting the patentability of business methods and the enforcement of business method patents. The proposed laws were not passed. After the burst of the dot.com bubble and the events of September 11 2001, the issue lost some of its political appeal, and no further legislation has been proposed since.

Commendably, the USPTO has been diligently addressing the large volume of patent applications claiming busi-

Table 4

Examples of financial technology firms with patent portfolios

Firms	Total number of patents	Number of 705 patents
Diebold	164	19
First Data	54	16
Proprietary Financial Products	8	8
Financial Engines	5	5
Financial Services Technology Consortium	4	4
NextCard	3	3

The data was obtained from the USPTO website and reflects the number of patents assigned on their face to these firms. The data does not include patents assigned to the companies post-issuance.

ness methods. The agency hired new examiners, and provided them with special training pertinent to business method searches and examinations. Today, there are about 120 examiners in class 705, compared to about 17 in 1999. Furthermore, the USPTO reached out to industry for help and established new guidelines for applications classified in class 705. For each application in that class, the examiner must perform a search in patent and non-patent databases identified as pertinent to business methods. In each allowed application, the examiner must include “reasons for allowance” for each allowed independent claim. Each allowed application in the class is subject to a review by a “second pair of eyes”. These actions have led to more thorough examinations of business method patents and fewer “questionable” issued patents. In fact, it could be argued that the examination of Class 705 is too rigorous, as evidenced by the allowance rate in class 705 which was purported to be about 26% in 2002 compared to about 65% for other classes.

The lower allowance rate, combined with the abandonment of applications by defunct dot-coms, has resulted in a flattening out of the number of issued patents from class 705 over the past three years. This trend is shown in table 1. Because large companies will continue to increase their application filings in this area, we believe that the number of issued patents from class 705 will continue to increase. In that regard, the number of published pending applications in class 705 is impressive (about 6000 per year in 2002 and 2003), indicating that a great number of applications are in the pipeline. Furthermore, the USPTO should not further lower the allowance rate. In that respect, we have empirical evidence from our own practice that business method applications are being allowed at a higher rate in 2003 than in 2001 to 2002.

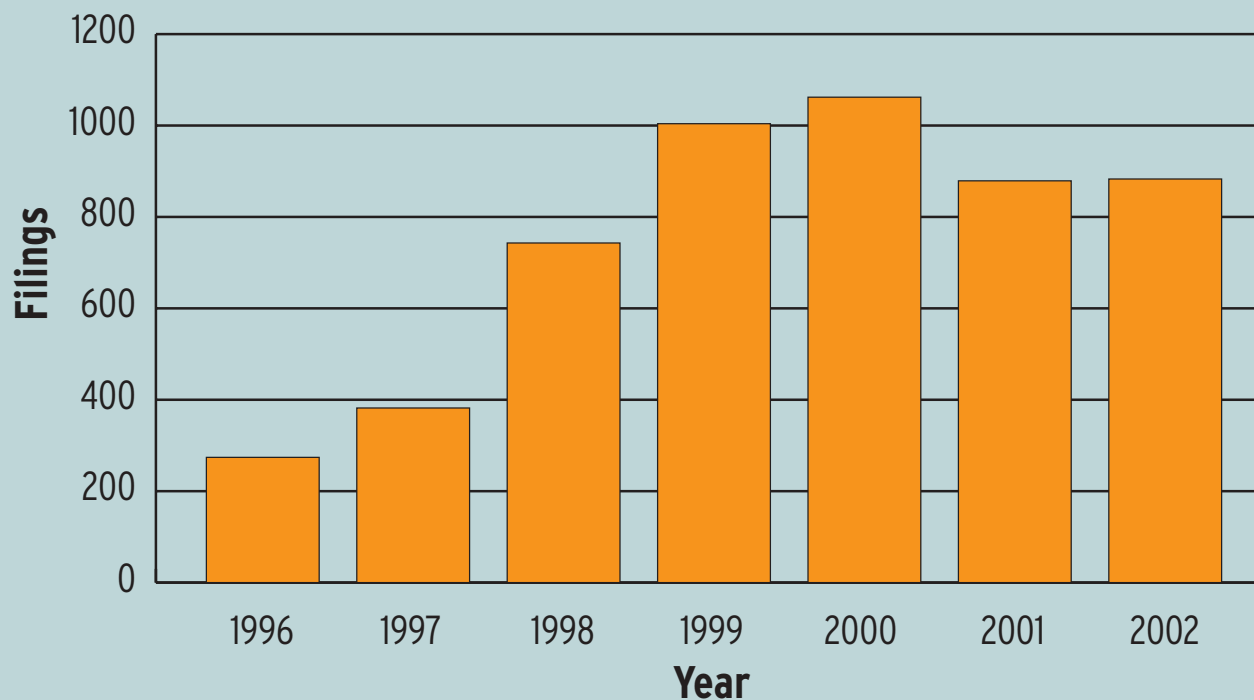
Table 5

US litigation over business methods

Dates	Parties	US patent number and technology at issue	Case disposition
1982-84	Paine, Webber v Merrill Lynch	US 4,346,442 covering a cash management account	Court found patent claimed patentable subject matter
1989-89	College Savings Bank v Centrust Savings Bank	4,752,877 and 4,722,055 covering methods for funding a future liability of uncertain cost	Case settled with licence agreement
1993-99	Meridian v Chase Manhattan, Bank One, Visa, Chem. Bank, Mastercard, Bank of America, GE Capital, et al	5,025,372 covering a credit card incentive awards programme	Cases settled with licence agreements
1994-95	Citibank v Online Resources	RE30,773; 4,392,023; and 5,195,130 covering screen phones terminals used in banking industry	Case settled with cross-licence agreement
1994-98	State Street Bank v Signature Financial	5,193,056 covering a system for administering a partnership of mutual funds assets	Appeals Court found patent not invalid
1994-99	Travelers Express v American Express	Patents covering money order dispensers	Case settled with licence agreement; court ordered defendant to pay \$10 million in royalties under settlement agreement
1997-03	Katz v AT&T	Katz's portfolio (about 50 patents) covering interactive technology used for example in financial services call processing (activating credit cards, transferring funds, changing PINs) and securities trading	Case settled with licence agreement; patentee ultimately obtained licences from American Express, Bank of America, Capital One, First Data, First Union, Mellon Financial, Prudential, Wells Fargo, et al
1999-99	Cantor Fitzgerald v Liberty Brokerage	5,905,974 covering an electronic auction trading protocol	Case settled
1999-02	ESpeed v Chicago Board of Trade and Chicago Mercantile Exchange	4,903,201 covering automated futures trading systems	Case settled with defendant paying patentee \$30 million
2000-01	S1 v Corillian	6,023,684 covering a system for communicating between a financial institution and its customers	Case settled with licence agreement
2000-03	Minton v NASDAQ	6,014,643 covering a computerized securities trading system	Court found patent invalid (on-sale bar and obviousness grounds)
2000-	E-pass Tech v 3COM	5,276,311 covering system for simplifying the use of credit cards, check cards and ID cards	Case is pending
2001-	NetMoneyIn v Mellon Finan., Verisign, Paymentech, Online Credit, American Express FA, Bank one, Citibank, Wells Fargo	5,822,737 and 5,963,917 covering methods for accepting credit card payments over the internet	Patentee is seeking a permanent injunction and enhanced damages; case is pending
2002-	DataTreasury v JP Morgan	5,910,988 and 6,032,137 covering an electronic processing system of banking documents and information	Patentee is seeking preliminary and permanent injunctions, and enhanced damages; case is pending
2002-	First USA Bank v Paypal Inc	6,227,447 and 6,341,724 covering a method of completing a credit card transaction	Patentee is seeking a permanent injunction and damages; case is pending
2003-	Reuters v Bloomberg	5,924,082; 5,924,083; and 6,260,025 covering a system for matching potential counter parties to a transaction	Patentee is seeking a preliminary and permanent injunction and enhanced damages; case is pending
2003-	eSpeed and Cantor Fitzgerald v BrokerTec, et al	6,560,580 covering systems and methods for managing auction-based electronic trading	Patentee is seeking preliminary and permanent injunctions and enhanced damages; case is pending.
2003-	Decisioning.com v FDS Bank et al	6,105,007 covering systems for establishing a financial account without human intervention	Patentee is seeking enhanced damages; case is pending
2003-	Lava Trading v Sonic Trading Lava Trading v Royalblue	6,278,982 covering methods for providing trading information to traders	Cases are pending

Figure 1

Number of issued patents from class 705



The data was obtained from the USPTO website. The data for 2003 is extrapolated based on the first three quarters of 2003.

Who is obtaining business method patents?

At present, the majority of patentees from class 705 are individual inventors and relatively small companies. This is expected from an industry that initially considered the internet as its core technology. Even now, developing a patentable business method does not necessarily require large overheads for research and development. Often the business method is not even implemented before the patent application is filed. A number of large companies, however, are active in this field, as shown in table 1.

Turning to the finance-related companies, some of the major players are shown in tables 2 to 4. Table 2 focuses on banks, where Citibank and Chase Manhattan already have begun to lay the groundwork for what we imagine will ultimately be impressive patent portfolios. Table 3 includes financial services companies other than banks. Visa, Merrill Lynch, American Express, and Mastercard lead this group. Table 4 looks at financial technology firms that provide hardware and software for financial institutions. Diebold and First Data are active in this area. Looking at the overall picture, it is clear that finance-related companies are mining their businesses for inventions and increasingly investing in business method patents that cover these inventions.

What is being patented?

Just about any activity that is performed by financial institutions relates to methods and systems being patented. The number of patents is so great and the activities covered so varied that providing a few examples of patents would not accurately illustrate what is being patented. Instead, we list below a number of activities related to methods and systems being patented.

- Administering/managing bank accounts, loans, mortgages including:
 - opening/closing accounts
 - approving loans/mortgages
 - transferring funds
 - processing checks
 - providing foreign exchange
 - paying bills electronically
 - banking online, at ATMs, with e-wallets
- Administering charge/credit cards including:
 - performing credit analysis
 - issuing/managing credit/debit cards
 - activating/verifying credit cards
 - calculating interest rates
 - predicting financial risks
- Administering/managing investment portfolios, personal

Investors, creditors, stock analysts, and potential acquirers can be positively influenced by the company's patent portfolio

financial plans, pension and insurance benefits, including:

- selecting securities (financial planning)
- trading securities
- cash management
- exercising stock options
- Administering/managing insurance policies, including:
 - calculating and displaying premium quotes
 - processing insurance claims
 - estimating cost of liability
 - projecting death benefits payments

Finance-related companies are licensing and enforcing their patents

What good is a patent portfolio if you do not license or enforce it? Not much. This point seems fully understood by owners of finance-related patents, who are actively enforcing and licensing their rights. Table 5 reports a few examples of litigations involving finance-related patents. In many of these cases, the patentee has gained from the enforcement either by stopping a competitor's activity, obtaining damages, earning licence royalties, maintaining an activity via a cross licence, or defending against another patentee. Furthermore, the deterrent effect on would-be competitors can be quite strong. For example, if competitor X sees that competitor Y has been sued for patent infringement by a patent holder, competitor X may opt not to enter the market for fear of stepping into a lawsuit.

The benefits of a strong patent portfolio

As a result of these and other publicized cases, there is now a widespread recognition that financial business method patents are important. Relationships between financial institutions and finance software firms are being stressed by patent disputes. Large institutions are exposed to suits by an increasing number of patentees of all sizes. A strong patent portfolio can be a powerful deterrent against law suits from other patentees, and it can provide the basis for a cross-licence agreement. While there might still be a reluctance among major institutions to battle each other, attitudes may be changing. This is especially true when large markets are

at stake. Financial institutions look at their patent portfolios as a way to keep competitors out of those markets, and/or as a source of revenue from licence royalties.

Financial institutions are finding other benefits in investing in strong patent portfolios. In a dispute between companies, patents can provide other claims for remedies, in addition to unfair competition, trade mark, copyright, or antitrust claims. With their statutory presumption of validity, patents are powerful negotiation tools. Patent infringement claims can lead to the recovery of greater damages. If the infringement is wilful, the compensatory damages can be multiplied by three ("enhanced damages"), thus significantly increasing the other side's liability. In addition, patents create assets that remain within the company when the inventor-employee leaves the company. Patents thus provide an alternative to enforcing non-compete agreements against a competing company, as opposed to suing an individual who may not have the resources to pay damages.

Furthermore, patent applications (and patents) can provide the basis for provoking an interference with a competitor's issued patent, thus providing an opportunity to invalidate the patent without the expense of a full litigation. Filing patent applications can also create prior art that can be useful in revoking a competitor's patent via a reexamination procedure or in invalidating the patent during litigation.

Developing and maintaining a business method patent portfolio also offers benefits in a non-litigious context. For example, investors, creditors, stock analysts, and potential acquirers can be positively influenced by the company's patent portfolio. Furthermore, companies can receive tax deduction benefits from donating unused patents.

In addition, an internal patent department provides valuable expertise for the financial company. It can track the patent activities of competitors, thereby providing important information about their areas of business development. A patent department can also help ensure that new financial products do not infringe competitors' patents and thus do not expose the company to patent liability.

Business method patent portfolios essential

Finance-related companies will continue to obtain and enforce their business method patents in order to reap the benefits of their intellectual property rights in this information-based economy. In order to compete in this economy, companies will have to develop and maintain strong international business method patent portfolios.

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