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Patenting In Insurance Starts Shaping Up As Robust Discipline

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Patenting in the insurance business has developed into a robust discipline with mature complexities. Insurance company management and legal counsel find themselves in a much more complicated environment where they must consider a variety of issues involving intellectual property rights.

They must also deal with growing concerns about how to protect commercially valuable developments against losses resulting from government activity, including regulation and litigation. This is the first of several articles that will appear in *National Underwriter,* dealing with the state of the art in using intellectual property law in the insurance industry. We begin with some history and basic ideas.

For over 30 years, it has been known that a patent can be used to indirectly protect an insurance innovation. For instance, U.S. Patent No. 3,634,669, filed by Aero-Flow Dynamics in 1969 and issued in 1972, covers an analog computer (i.e., an amplifier) with input dials for determining certain insurance premiums with a voltage gage.

Also, U.S. Patent No. 3,698,630, covering a circular slide rule that calculates insurance premiums, was filed by Metropolitan Life in 1970 and issued in 1972. A patent provides the exclusive right to make, use, or sell a machine (programmed computer), process (method of making or using the programmed computer), or an article of manufacture (software on a diskette).

Although an insurance innovation cannot per se be patented, it is possible to protect the computer support necessary for the innovation so broadly that using any computer and any software to carry out the patented activities would infringe the patents. Indirectly, this kind of protection can equate to the exclusive right to the product or service itself for the patent term (20 years from the first filing date. But enforceable only after the patent issues).

The objective is to use a patent to obtain a royalty stream from sales made by a competitor. Thus, in an insurance company, a true research and development group in combination with the informations services department can be a significant profit center in and of itself.

Insurance companies with patents include Metropolitan Life Insurance Company (20), Liberty Mutual (11), Hartford Life (5), Allstate (3), Aetna (3), Prudential (2), and Lincoln National (2), and dozens of companies with only one patent. Interestingly, the majority of these patents do not pertain to insurance *per se*, but instead show the vertical integration of the insurance companies involved.

For instance, Met's patent portfolio includes 11 plan patents on various fruit tree cultivars. Meanwhile, other insurance companies have patents on prosthetic devices, ultrasonic detectors for boilers, chemical treatments for diseases, etc.

Chronologically, it appears that patents on insurance innovations evolved from company experience pursuing patents in other related areas, all long before other financial services caught on to the idea. When the industry turned to patents for insurance innovations, the initial approach was to have each innovation protected by a single patent.

Examples include: U.S. Patent No. 4,837,693 on a computerized insurance premium quote request and policy issuance system (The Chubb Corporation 1989); and U.S. Patent No. 4,975,840 concerning a method for evaluating a potentially insurable risk (Lincoln National 1990).

This approach still continues. One example is U.S. Patent No. 5,806,042, which covers a system for designing bank owned life insurance with a reinsurance option (unassigned 1998).

For highly valuable innovations, insurance companies have begun obtaining clusters of patents for added protection. Thus, while a potential infringer may be able to avoid one or two patents, they will not likely avoid five or ten patents. This is especially true if some applications are kept pending in the Patent and Trademark Office, to be tailored and issued in response to whatever defense the potential infringer may pursue. As demonstrated in other industries, this approach greatly increases the likelihood of success in obtaining royalties. That's because litigation would more likely be a hopeless long shot against a patent owner with all the cards, including wild cards up the sleeve (most U.S. patent applications are confidential).

Ryan Evalulife Systems is pursuing this approach. U.S. Patent No. 5,673,402 covers a hybrid mortgage/insurance product for purchasing a home with smaller up front costs, the cash value builds up to retire the interest only mortgage, and if the seller retires the mortgage for cash, the seller keeps the life insurance policy.

Also, Ryan's U.S. Patent No. 5,655,085 covers computerized insurance quoting for universal life insurance products. Based on disclosures in these two Ryan patents, Ryan filed a third patent application in 1992 that would cover quoting and selling all insurance, annuity, IRAs, 401(k), securities, certain mortgages, and other financial products on the Internet. This application is still pending.

All the Ryan patents are related. Another leader in protecting financial innovations with patent clusters is Hartford Life Insurance Company,

(continued on page 14, column 1)

Patenting In Insurance Starts Shaping Up as Robust Discipline

continued from page 13

which has obtained four of its five patents in the last two years.

The company's U.S. Patent No. 5,802,500 covers computing involving the use of insurance in trusts to set aside money for Other Postretirement Employee Benefits under FASB 106. Hartford also is an owner of U.S. Patent No. 5,136,502 on a similar subject and has further patent applications pending. U.S. Patent No. 5,590,037 covers a method for producing an illustration of a prefunding program for an employee benefit, and U.S. Patent No. 5,839,118 covers an insurance/loan optimization system.

It could be said that using patents for insurance innovations is, *per se* an active area. In fact, the PTO has so many patents and applications that it has designated a separate subclass to keep track of them, and the PTO has assigned about 20 examiners to handle applications in the financial and insurance industries.

The usual backlog delay in obtaining such patents is upwards of three years. Cash value life insurance areas have been the most active, as indicated above. However, the workers' compensation field seems to have come alive. U.S. Patent No. 5,613,072 covers a system for funding WC losses (Risk Data 1997). B & S Underwriters has announced that the Patent Office has allowed its patent claims covering its Alternate Plan (R) WC, involving the use of combined health-life and property-casualty policies to provide WC coverage.

Hospital/medical insurance patent activity abounds. US Patent No. 5,832,447 covers an automated system and method for real-time verification of health insurance eligibility (Envoy Corporation 1994). Mean-while, U.S. Patent No. 5,235,507 covers a health insurance management system (P.B. Toau and Company, Ltd. 1990). These are only a few examples.

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Despite all this patenting activity, there are some trouble spots on the horizon. The primary obstacle is the Patent and Trademark Office, which serves as a gatekeeper for our nation's technology.

In determining whether an invention is patentable by law, the PTO follows an Examination Guideline that largely repackages an earlier Guideline in new government speak.

Under the old Guideline, the PTO would reject patent applications covering a programmed computer for insurance computing as an unpatentable "method of doing business."

Under the new Guideline, the same computer system is unpatentable as an "abstract idea" for manipulating insurance concepts—but it is still a rejection of a programmed computer as a machine. A recent federal court decision, *State Street Bank vs. Signature Group*, upheld a computer system patent broad enough to gain exclusive rights to an entire class of financial products (multi-tiered mutual funds). The court considered the so-called "business method" exception used by the PTO to determine whether computer program-related inventions are patentable and stated, "We take this opportunity to lay this ill-conceived exception to rest."

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Despite the court's clear decision, PTO has not changed it's policy on examining patents to come in line with the decision or the body of law on which the decision is based. There has been little improvement since the time of the prior Guideline.

Efficiently getting patent protection is an ongoing significant challenge. This is made more difficult because a patent examiner background in computer science and insurance is about as rare in the patent examining corps as it is in the patent bar.

The problem hurts independent inventors and small companies the worst. Everyone knows that such a PTO rejection will be reversed on appeal, because the PTO has lost every case involving patent claims limited to a programmed computer since the creation of the Federal Circuit. But small companies cannot afford the cost and the half-decade or greater delay in getting a patent when an appeal is involved.

Unfortunately, there is no hint that the PTO will conform with case law. Just as the Internet is changing the financial world, the new trend of using patent clusters to cover Internet insurance and other financial activities can reshape the face of the insurance industry. The field of patents in the insurance industry has grown by leaps and bounds over the last decade, but undoubtedly, the same will be said 10 years from now.

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Editor's Note: A searchable database of issued patents can be found on the internet at www.uspto.gov/patft/. We are aware of three recent patents obtained by actuaries and hope to have an article in a futue issue of Risks and Rewards.