

INSURANCE IP BULLETIN

An Information Bulletin on Intellectual Property activities in the insurance industry

A Publication of - Tom Bakos Consulting, Inc. and Markets, Patents and Alliances, LLC

Introduction

Our third issue, we hope, will provide further enlightenment regarding the growing use of patents in the insurance industry to protect the value of the intellectual property being created by individuals and funded either personally or by insurance companies.

In this issue **Francois Gadenne**, President and CEO, and **Ben Williams**, VP and Chief Technical Officer, both of *Retirement Engineering, Inc. Boston, MA.*, provide an inventor's perspective on the impact of intellectual property rights on insurance product innovation - in particular, their own. Retirement Engineering, Inc. develops financial product concepts, secures the intellectual property rights, and supports its licensed manufacturers and distributors with consulting and certification services. In particular, Retirement Engineering, Inc.'s future-income-denominated™ financial products enable financial institutions to meet the growing demand for predictable retirement income solutions.

Our mission is to provide our readers with useful information on how intellectual property in the insurance industry can be and is being protected – primarily through the use of patents. We will provide a forum in which insurance IP leaders can share the challenges they have faced and the solutions they have developed for incorporating patents into their corporate culture.

Please use the FEEDBACK link above to provide us with your comments or suggestions. Use QUESTIONS for any inquiries. To be added to the Insurance IP Bulletin e-mail distribution click on ADD ME. To be removed from our distribution click on REMOVE ME.

Thanks,
Tom Bakos & Mark Nowotarski

Upcoming Patent Session

Casualty Actuarial Society Annual Meeting, Montreal, Canada - November 15, 2004

Tom Bakos and Mark Nowotarski will be discussing the impact of patents on the P&C industry at the annual meeting of the [Casualty Actuarial Society](#) on November 15, 2004 in Montreal, Canada. They will be tentatively joined by **Joseph Thomas**, Supervisory Patent Examiner for Insurance Related Inventions, **United States Patent and Trademark Office**. Joe will discuss the statutory requirements of patentability for insurance related inventions. The session title and description are:

The End of Free Sharing in the Insurance Industry

There is an increased awareness and use of patents within the P&C insurance industry. Everyone from major carriers to independent actuaries are attempting to patent their new insurance inventions. Those that succeed may be able to dominate new markets. Those that pay no attention to this developing trend will

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be relegated to selling old forms of coverage or licensing the innovative new ideas of others.

This panel will discuss who is getting patents, what are they getting them on, and how they are using them to protect the value of their intellectual property and create competitive advantage. Attendees will learn how to recognize when they themselves have made a potentially patentable invention. They will also learn what actions they can take now to avoid losing their or their employer's patent rights in the future.

More information and registration can be found at: www.casact.org/coneduc/annual/2004/

Feature Article

The Impact of Intellectual Property Rights on Insurance Product Innovation

By: **Francois Gadenne**, President and CEO, Retirement Engineering, Inc. (www.IncomeAtRisk.com) Boston, MA., fg@DBinDC.com, and **Ben Williams**, VP and Chief Technical Officer, Retirement Engineering, Inc. Boston, MA. jbw@DBinDC.com.

Francois and Ben have several patent applications pending in the USPTO.

Intellectual Property rights will give innovative individuals and insurers competitive advantages they've never had before. Insurers with patent protected technologies will grow faster than their competitors. Patents will enable more innovative as well as longer lived products. In the field of retirement income, patents provide a unique opportunity for insurers to compete with their traditional investment product rivals. Seventy percent of current patents and patent applications are filed by individual inventors. These patents represent a readily available resource for insurers to license and build into exclusive new products.

Recent conversations we have had with insurance industry executives highlighted a consensus that the industry has low annual growth rates. The average growth rate expectation is about 3%. In order for an insurer to grow faster than this low rate, it would need to take market-share away from its competitors.

While some rating agency analysts may disagree, insurance industry executives believe that insurers shun price cuts in favor of both product innovation and distribution differentiation to compete for market share. This approach is taken in an industry that historically has not had a culture that valued proprietary or intellectual property rights. New ideas and product concepts are documented in public filings and can be easily copied by competitors when introduced into the market. And, interestingly, insurers who quickly copy product innovations can expect to do as well or better than the product innovators.

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In the field of retirement income, many of the insurance industry's innovations have historically focused on annuity product variants sold as investment accumulation vehicles and priced with the expectation of a short sales-cycle before they become widely copied. In a market in which new ideas have not been protected, the quick copying of successful new product introductions is not unusual. Distribution channels have become the insurance industry's de-facto customers and they have demanded clones of successful products from their carriers. The reason the market has focused on investment as opposed to income products is that Baby-Boomers were in their prime saving and accumulation phase.

Current innovative efforts in annuity accumulation markets are focusing on what is not evident. And, what is not evident is the fact that these markets are moving from an investment accumulation focus to a retirement income focus. Because of this, the distribution channels are not fully satisfied with the traditional flow and types of products coming from the industry. Distribution channels want products that can be simply-sold and that directly address individual investors' retirement income needs.

But something else is also happening. Respected insurance industry leaders¹ have made the call for both the importance and the urgency of the protective role of patents in product innovation. This will likely impact the competitive environment. We agree. We further believe that retirement income product concepts with protected Intellectual Property (IP) will give innovative individuals and insurers competitive advantages that they have never had before.²

Specifically, we expect that insurers with patent protected innovations that successfully address the new market needs will grow faster than competitors who rely on traditional product technologies. The competitors won't be able to freely copy patent protected innovations without licenses from the patent owners. Innovative insurers who meet the needs of their distribution channel customers with patent protected new product innovations have a better chance of controlling their growth and adding assets and profits to their bottom line.

In addition we feel that IP protected innovation in the retirement income market can go "outside-the-box" with a better chance of success. Such products will offer visible, potentially breakthrough differentiation at the individual investor level. Some of those innovations may not have to be called annuities. Insurers with such innovations will generate more consumer level interest for their distribution channels customers.

Current inventive efforts in the retirement income market recognize that, after more than 20 years of products that rely on a hopeful asset accumulation, the market's pendulum is swinging

¹ "Ignorance Will Be No Excuse" - Insurance I.P. Bulletin, August 15, 2004.

Phil Hargrove, Vice President, Intellectual Asset Management, GE Employers Reinsurance Company, Kansas City, MO

² "Protecting Your Insurance Patent, Or, Millions Of Dollars For Your Thoughts" - *National Underwriter Edition*, April 16, 2004.

Tom Bakos, FSA, MAAA and Mark Nowotarski

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back in favor of guaranteed retirement income. The availability of IP protection for new retirement income products represents a unique opportunity for insurers in their historical competition against investment products. Annuities have survived the investment accumulation era, and now IP protection offers innovative insurers an opportunity to claim as their own new retirement income products.

Finally, protecting innovation with patents enables longer product lives within the innovating company. Innovators with longer-lived products will be able to take greater market-share than previously experienced. Therefore, patent protected innovation will combine greater volume with the higher margins required to amortize the research and development costs associated with innovation

We see a significant insurance industry change coming. Insurers who now quickly copy successful new product introductions will be forced to build and manage their own patent protected IP portfolios to compete with other insurance company innovators who are already protecting their IP with patents. Indiscriminant copying of new product ideas will have new risks as well as new costs associated with patent infringement lawsuits. Being first to market will favor the innovating insurers and distributors who patent their innovations or acquire the patented innovations of others.

Patent Tech

Why Does The Patent System Exist?

A comment from Charles Call (cqcall@comcast.net), 68 Horse Pond Road, West Yarmouth, MA 02673-2515. Charles is the patent attorney for this issue's feature article co-author, Ben Williams

The central point made by Francois Gadenne and Ben Williams in their feature article in this issue, in my view, is the "real reason" the Patent System exists. It's often said that patents reward innovation, or encourage early publication of ideas. But we could live without either or both of these supposed benefits, and it's likely neither is worth the cost of administering the patent system or the burden patents often place on the unwary.

The patent system instead exists to protect the investment that MUST BE MADE if innovations are to be successful, and won't be made without patent protection. The "smart money" will never invest the time and money needed to develop, perfect, and market new products or services that can be easily copied by others who simply wait to market what experience has proven can be successful. It's a far better plan to let others be the pioneers, let them suffer the arrows in their backs, and instead spend money only on proven ideas.

The pharmaceutical industry understands this. A hoard of generic drug vendors waits in the wings until basic patents expire on successful drugs. Why would any company spend a fortune on R&D, most of which comes up empty, and then spend years more shepherding the few

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successful drugs that are discovered through the FDA approval process, if imitators can clone the successful products without bearing those expenses?

Those who think patents are legally sanctioned predatory tools designed solely to enrich speculators should think again. Most patents are obtained to protect the investment needed to bring new things to market against unfair competition from those who have borne no comparable burden.

Viewed this way, patent protection is essential to any successful effort to provide innovative new products and services. The insurance industry doesn't yet understand this. Happily, we don't need to persuade the entire industry, just a few smart people.

Patent Watch

Progressive Builds a Fortress of Patent Protection

Progressive is using sound patent strategy to build a fortress of patent protection around their innovations in telematic auto insurance. Their patent strategy includes filing an original patent application early in their development process and broadening the coverage of their original patent application with follow-on patent applications called "continuations" and "continuations-in-part".

Continuations and continuations-in-part are used to broaden coverage of an original patent application.

A continuation is a copy of an original patent application except that the inventor puts in new "claims". The new claims cover different aspects of the invention than the original claims covered. The new claims of the continuation are examined by the patent office. If the claims are allowed, a second patent issues. Thus an inventor can make it more difficult for a competitor to get around an original patent because the competitor would have to avoid infringing not only the claims of the original patent, but the new claims of the second patent as well.

Claims are numbered sentences at the end of a patent. They describe an aspect of an invention disclosed in a patent application. An inventor only has rights to what they claim. Any aspect of an invention described in a patent that the inventor does not cover with a claim is dedicated to the public. Inventors protect themselves against unintended dedication by filing continuations or continuations-in-part.

A continuation-in-part is similar to a continuation except that the inventor adds a description of the improvements to an invention that were made since the original application was filed. The inventor submits claims covering the improvements. The claims are examined and, if allowed, an additional patent issues protecting the new improvements.

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Progressive's campaign to protect their innovations in telematic auto insurance began in January of 1996 when they filed their original patent application. They filed several years before they actually tried their invention in an evaluation in Texas. By filing early, they made sure that they would not run the risk of losing their rights to a patent due to premature public disclosure or an "offer to sell".

The original invention described in the Progressive application was equipment and processes used to determine auto insurance premiums by directly monitoring driver usage and behavior. Driver usage and behavior were monitored by putting a global positioning system and a cell phone in a car. The cell phone would transmit the global positioning information to the insurance company on a periodic basis, such as monthly. Driver behavior, hence risk, hence underwriting class and hence premium were deduced from the transmitted information. Premiums could change monthly to the extent that driver behavior changed monthly.

Progressive's original application issued as a patent in August 1998. The number and title of the original patent is US patent 5,797,134, "*Motor vehicle monitoring system for determining a cost of insurance*". The claims in the patent cover several different aspects of their invention. The claims cover an improved method for determining a cost of automobile insurance, an improved processes for acquiring insurance related data, an improved method for generating an actuarial class and an improved system for extracting data from a car. If a competitor attempts to copy any one of these claimed aspects of Progressive's patent, then they will infringe the patent.

Before the patent issued, however, Progressive filed a continuation. The continuation had new claims covering additional aspects of the invention. The claims of the continuation were examined and allowed by the patent office. The second patent with the new claims issued in May of 2000. The second patent number is US 6,064,970. The title is the same as that of the original patent.

The second patent has additional claims covering more aspects of the invention. These additional aspects included a method of generating a database representative of operator driver characteristics, a method of insuring a vehicle based on operator driving characteristics, and a method of monitoring a human controlled motor vehicle.

By filing the continuation, Progressive was able to cover more aspects of their invention and thus make it more difficult for a competitor to find gaps in their patent protection.

Meanwhile, Progressive had continued to improve their invention while the original application and continuation were pending. In order to get patent protection for these improvements, Progressive filed a continuation-in-part. The continuation-in-part was filed before the second patent issued.

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We don't know what is in the continuation-in-part since it has not been published. We do know that the application number is 09/571,650, and we also know that at least some of its claims have been allowed. A patent with these new claims, however, has not issued yet.

Progressive has not stopped improving their invention. In January of this year, they filed yet another continuation-in-part. This second continuation-in-part covers improvements they have made since the first continuation-in-part has been filed.

The second continuation-in-part has been published. Its publication number is US 20040153362 A1 and its title is "*Monitoring System for Determining and Communicating a Cost of Insurance*". In this continuation-in-part, Progressive goes beyond mere insurance inventions. They describe inventions for actually reducing risky driver behavior. One of their inventions provides feedback to drivers based on the information available from a telematic auto insurance system.

Each of these continuations and continuations-in-part have kept Progressive's original application alive in the patent office. This means that Progressive can continue to patent improvements to their invention without having their original patent cited against them as prior art. It also means that they can reach back to the original application any time they need to and close a gap in their claims that might be discovered by a competitor.

Filing early and filing continuations and continuations-in-part is an effective strategy for building a fortress of patent protection around a new technology. Progressive is just one of several insurance companies that are employing this tactic to strengthen the patent protection of their new insurance inventions.

Patents in Action

Why Isn't the World Beating a Path to my Door?

If you are an individual inventor (or group of individual inventors), finding a market for your new, inventive insurance product idea is never as easy as you think it should be. If it were, everybody would be doing it and, then, where would you be? ... probably, in a long line someplace. The truth is it's hard, it takes time and effort, and usually money to find a market for a new product idea. Especially in the insurance industry, nobody is looking for you, the inventor, at least not yet. You've got to find them. How do you go about doing that?

Start by having a complete understanding of your own insurance invention. Understand and be able to articulate the specific problem or problems that your invention solves. That is, be prepared. Be prepared to explain not only how your invention works but that it will work. The fact that your invention actually will work to solve their problem will not necessarily be obvious to those you try to sell your invention to. If it were, it might not be patentable subject matter.

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Recognize that the insurance industry is not known, in general, for its innovation. Clearly, there are some innovative leaders in the insurance industry but most insurers are followers. And, surprisingly, although the business of insurance involves the assumption of risk, most insurance companies are not risk takers in a business sense. In this regard they behave like any other company. In reality what insurance companies do is participate in the *management* of risk. They don't insure one life, they insure tens or hundreds of thousands of lives, businesses, or events. The risk insurance companies assume in doing this is not that great. The law of large numbers mellows out the risk and makes the overall result of insuring large numbers rather predictable.

So, in presenting any new insurance idea to an insurance company, you ought to do research and development in advance. The idea is to anticipate the questions and concerns an insurer will have about the design, marketability, pricing, administration, valuation, and legal or regulatory issues they may see as impediments to implementing a product based on your invention in their company. First, by doing this in advance you will have determined that your invention is practical before making any presentations and, with these issues already adequately addressed, you will be able to focus on whether or not you have found the "right" insurer.

The first step in any sales process is "to disturb". That is, make the prospective customer for your invention realize that they have the problem your invention solves. But, be reasonable. Not everybody needs your solution. Eskimos don't need snow, skiers do. So, metaphorically speaking, you would be much more successful interesting a ski resort located in a marginal area relative to natural snow production in your new, innovative, more efficient snow making process than you would an Eskimo village. Therefore, step one is identify insurance companies that have the problem (or, would love to have the problem) that your invention solves.

To understand the "would love to have the problem" category of companies we'll go back to the metaphor. There may be a mountainous area with fairly steep ski-able slopes, with temperatures cold enough to support snow, but with little or no regular participation. No one ever thought of putting a ski resort there because there was never any snow there. You're more efficient and economical snow making process solves the problem they didn't know they had and they could be an excellent candidate for your invention.

Of course, getting anyone, any insurance company interested in implementing any new idea will require that they change. What this means is that you will have, at least, two sales to make - your invention as a solution to their problem and a reason for them to *change*. Even though you are successful in convincing an insurer that your invention will work and solve a problem that they have, you may be told that this is just not the right time in their product development cycle. Or, some other activity is taking their full attention right now. You will be praised all the way out the door.

Therefore, an additional selection criteria is to find an insurance company ready for or interested in change so all you have to do is sell your invention. These types of companies would include

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insurers who are at the right point in their product development cycle and are currently in the process of updating and changing their portfolio in areas in which your invention could apply. They are probably going to be very interested in sprucing up the competitive position of their insurance product portfolio. So, the opportunity to gain access, and some level of exclusivity, to the new and exciting patented product technology you are offering to them may be of great interest.

Outsiders to the insurance industry will always have a more difficult time selling an insurance invention than insiders with connections or pre-existing relationships. Outsiders, generally, would tend to have less credibility when dealing with an insurance company and, because of their lack of experience in the industry, outsiders might, themselves, feel and appear to be more awkward in trying to develop a relationship with an insurance company. For an individual inventor in this position the only advice is find a friend. Partner with someone who has the insurance skills you lack and who can address the industry problems which your invention solves with confidence.

So, the steps so far are:

- Understand and be able to articulate your own invention.
- Prepare research that will make it easier for other to understand that your invention will work.
- Disturb the right people.
- Focus on those companies ready for change.
- Otherwise, be prepared to sell change first, then your invention.
- If you are an outsider, find an insider friend.

The last thing, of course, is be ready for defeat. A salesman does not, typically, get a lot of positive reinforcement. As brilliant as your idea may be, a very small percentage of the insurance companies you contact will be ready for it.

And, ... another thing. Your idea may not be brilliant at all. Yes, its inventive by definition especially if your patent has already been issued. But, it may not be brilliant. A significantly small percentage of issued patents result in commercially successful inventions. Be ready to join that club. Know when to quit ... and move on to the next great thing. Perseverance and determination pay off a whole lot more than their antonyms.

Statistics

An Update on Current Patent Activity

We continue to use patent activity in USPTO class/subclass 705/4 (which is the class for DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR COST/PRICE DETERMINATION and the subclass for

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INSURANCE) as a measure of invention in the insurance industry. The table below shows that since the last issue of the *Insurance IP Bulletin* (August 15, 2004) two additional patents have been issued and 24 more patent applications have been published.

Insurance Patents Issued by Year as of 10/12/04		Insurance Patents Pending by Year Published as of 10/12/04	
Class 705/4		Class 705/4	
YEAR	#	YEAR	#
2004	15	2004	123
2003	23	2003	128
2002	16	2002	164
2001	21	2001	30
2000	33	TOTAL	445
1999	38		
1998	20		
1978-1997	47		
TOTAL	213		

While we use patents or patent applications with claims in class/subclass 705/4 as an indication of activity in the insurance industry, there are other class/subclass categories in which patents or applications of interest to the insurance community might appear.

For example, there are 159 patent applications and 45 issued patents not included in the above totals which are in business method class 705 and use "insurance" and "life, "health", or "automobile" in their Claims.

Another example, there are 45 issued patents in class 705 not listed above (i.e. they are not in class 705/4) which use the words "actuary" or "actuarial" in the Specification. There are 117 more in other classes that use these words in their Specification. So, all together, there are 162 issued patents which might involve actuarial work in some way.

One of these patents (#6,381,510) is for **Methods and apparatus for facilitating electronic commerce in area rugs**. It offers a fairly interesting and useful method of shopping for area rugs for those with an interest in handmade rugs who may not be close to a showroom. "Actuarial" is used in the following statement taken from the Specification:

Maintenance of rug histories also enable the development of **actuarial** data about handmade rugs. For example, data mining techniques may be used to determine how often rugs are damaged or destroyed, as well as their average `life expectancy.` This

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information is necessary to the creation of an efficient market for *insuring* handmade rugs.

Of interest is that the Specification contemplates a more efficient market for insuring handmade rugs but makes no claims in this regard. Perhaps that may turn out to be an opportunity missed.

Again, a reminder -

Patent applications have been published 18 months after their filing date only since March 15, 2001. Therefore, there are many pending applications not yet published. A conservative assumption would be that there are about 125 applications filed every 18 months in class 705/4. Therefore, there are, probably, about 570 class 705/4 patent applications currently pending, only 445 of which have been published.

Because the pending patents total above includes all patent applications published since March 15, 2001, applications that have been subsequently issued will also appear in the issued patents totals.

Resources

These are links to web sites which contain information helpful to understanding intellectual property.

United States Patent and Trademark Office (USPTO) - <http://www.uspto.gov>

World Intellectual Property Organization (WIPO) - <http://www.wipo.org/pct/en>

Patent Law and Regulation - <http://www.uspto.gov/web/patents/legis.htm>

Insurance patent information – <http://www.marketsandpatents.com/>

Actuarial services – <http://www.BakosEnterprises.com>