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## JILT 2003 (1) - Ruth Soetendorp

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# Patenting Insurance Related Business Methods: Predictability and Risk

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## Abstract

This paper raises and responds to questions concerning the patentability of business method patents. It explores the utility of patent applications in informing business method innovators of the risks associated with using the patent system. The insurance industry was chosen since its survival depends on an ability to adapt rapidly in the face of unrelenting, unpredictable change. Inventive changes in the insurance industry include new business models and e-business technologies to improve operating efficiency or to build customer focus.

Using the European Patent Office's esp@cenet free patent database, a sample of patent applications for insurance industry innovations was retrieved. The paper then analyses the information contained in the patent application documents. A patent application requires public description of the invention in full enough detail to enable a person familiar with that business to produce it. If the application is successful, a granted patent gives the owner the valuable commercial advantage of a 20-year monopoly. If unsuccessful, the applicant will have disclosed the innovation to competitors.

**Keywords:** Insurance industry, patent, business method, software implemented invention, esp@cenet.

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This is a **Refereed article** published on 4 July 2003.

**Citation:** Soetendorp, R, 'Patenting Insurance Related Business Methods: Predictability and Risk', 2003 (1) The Journal of Information, Law and Technology (JILT).  
 <<http://elj.warwick.ac.uk/jilt/03-1/soetendorp.html/>>. New Citation as at 1/1/04:  
 <[http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2003\\_1/soetendorp/](http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2003_1/soetendorp/)>.

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## 1. Introduction

'In today's environment, the very survival of insurance companies depends on their ability to adapt rapidly in the face of unrelenting, unpredictable change. Many insurance industry players know that their survival depends on applying new business models and e-business technologies to either improve operating efficiencies or build customer focus - or both' (IBM 2000). In the drive to improve their products, insurance companies are continually identifying business problems that could be solved by computer implemented solutions. Patent applications for solutions to insurance industry problems suggest there is a perception in the industry that protecting these solutions as patentable inventions is a commendable course of action, even though the extent to which they might be considered patentable inventions in UK or Europe is unclear.

### 1.1 Using Patent Information to Assess Patent Risk

Granted patents evidence what a patent granting body has deemed to be patentable. Of the small sample of patent applications reviewed, several, in retrospect, had little expectation of successful process to grant. Given the opportunity cost of preparing an application, had the inventors given appropriate consideration to the risk of failure to proceed to grant? Why did the applicants choose to go through the public disclosure route of patent application, rather than choose to keep their innovation under wraps as a trade secret?

Patent specifications have traditionally taught how to solve technical problems. They do not teach whether a particular solution will be patentable or not. Esp@cenet is the 'free at the point of consumption' database provided by the European Patent Office. It holds comprehensive collections patent applications to the United Kingdom Patent Office, the European Patent Office of the European Patent Organisation, and International Bureau of the World Intellectual Property Organisation in Geneva that grants patents under the Patent Cooperation Treaty. But as patent information providers, the esp@cenet hosts offers no guidance as to whether a particular application might be successful or not.

Over the past few years there has been a rapid growth, internationally, in patent applications for systems or methods of doing business, usually involving the use of a computer. Whether a business system is patentable depends to a great extent on the way in which the invention is claimed, and the governing patent legislation of the country in which the patent is being sought. The insurance industry is engaged in continual innovation of its systems and methods for doing business. Using the insurance industry as a case study, this paper considers the European position on patentability of computer implemented business method inventions, and asks whether that position comes across to the patent novice from patent specifications. To what extent is the information accessible from a patent database useful to patent novice members of the insurance industry in forming the decision whether or not to proceed with a patent application?

## 2. Patents - History and Criteria

A Patent is the result of a bargain between an inventor and society, whereby a temporary monopoly is granted to the inventor in exchange for the inventor making available to society the information of his invention, through full disclosure in the patent specification.

Historically it has been the State that grants the inventor an exclusive monopoly for a limited time in his new invention, in return for disclosure; sufficient to enable the public to practice the invention once the patent expires. At one time disclosure was by way of teaching apprentices, but now the public is taught by way of the filed application document. Full public disclosure is required long before the inventor knows whether or not the patent will be granted. Patent documents are considered to be a valuable information resource, for industry, academics and innovators.

A patent is a monopoly right to exploit an invention for a limited time. To be patentable, from the 17th century, inventions were required to be new and not contrary to public morality and from the 18th to demonstrate an inventive step. The 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights [The TRIPS Agreement] Article 27 requires all inventions for which patent protection is sought to answer three basic questions in the affirmative, followed by a fourth, to be answered in the negative:

- Is it novel?
- Is there inventive step? [i.e. it is not obvious to the person skilled in the art]
- Does it have utility? [i.e. is it capable of industrial application]
- Does it belong to an excluded category?

For inventors of innovative computer implemented business methods, the fourth question is most crucial. Since any invention that falls within an excluded category is unpatentable because it is considered that to grant a monopoly in such an invention would be contrary to public policy.

TRIPS (Article 27 (2)) provides that members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ordre public or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law. The European Patent Convention [EPC] (Article 52 (2)) and the UK (Patent Act 1977 s1(2)) include, amongst others, discovery, scientific theory or mathematical method, scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer.

## **2.1 Patent Applications**

Patents are granted by national patent offices and by international bodies. The EPC governs the application for, processing and grant of a European patent. A single patent application to the European Patent Office [the intergovernmental organisation set up to administer the EPC] can lead to the grant of a patent in each country designated by the applicant. Once granted, the European patent is treated as a bundle of separate, national patents. Membership of the European Patent Organisation is wider than that of the European Union, currently 24 member states, and 6 extension states.

A patent application must include the following:

1. An abstract, which is a concise summary of the invention containing all the invention's technical features.
2. A description, which is a full and detailed description of the invention in words which may be accompanied by drawings.
3. Claims, which define the monopoly which the applicant hopes to protect. Main claims define the invention in its broadest form, including all the technical features; 'dependent' claims relate to additional features of the invention.

The description and claims are known as the patent specification. The specification of an application has to disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person familiar with the technology in question (Patent Act 1977 s14(3)).

## **3. Methodology**

The European Patent Office's database esp@cenet was used for this paper because:

- it is free at the point of consumption;

- it represents a comprehensive holding of patent applications;
- it is expected by the EPO to be used by patent novices.

esp@cenet introduces itself on its website ([www.european-patent-office.org](http://www.european-patent-office.org)) "Throughout Europe, national patent offices and the EPO offer free patent information on the Internet. Patents reveal solutions to technical problems, and they represent an inexhaustible source of information: more than 80 percent of man's technical knowledge is described in patent literature. esp@cenet is a free service that can provide answers to questions like: What is my competitor doing? Who owns this patent? What is new in my field of technology?" What it does not offer is explicit guidance on whether an invention will be patentable or not.

### **3.1 Working with esp@cenet**

esp@cenet is a great resource, but not always easy to work with. The EPO website hosts a review (Dulken 1999) by a librarian at the British Library, of free patent databases, which notes 'much more guidance, not less, should be available for those using the internet's databases. Unless they are in a patent library, there is no one to ask' and 'even if correctly entered searches are entered, a badly constructed search will lead to a poor result, which will not be apparent to the novice'. The reviewer questioned whether the database has ever been tried out on novices and suggested that 'if five people were each asked to look for the same thing, and the results compared, the consequences could be rather amusing' (Dulken 1999).

The author found documents difficult to download, and accessing single pages as pdf files made printing laborious. Files were not always presented in printable format. There is no readily available guide for the patent lay person to interpret the codes of a patent application's front page. The search engine did not retrieve all examples of documents carrying the specified term. Both business and academic communities might more readily use esp@cenet if the user interface were made more friendly. Because it is a free service, it has to compete for what it is able to offer with the commercial databases [e.g. Delphion Research intellectual property network [[www.delphion.com](http://www.delphion.com)]], but that does not mean it has to be an inferior product.

'Insurance' was used as the search term in the 'simple text' box of the esp@cenet search menu, and a small number of EPO applications having 'insurance' in the title were retrieved. The search term was chosen to keep the sample manageable for this initial investigation. However, the search was not complete and did not retrieve all examples of documents with 'insurance' in the title. This is attributable to the design of the database. A search retrieves the last, most recent, two year's work of EP publications. The 'window' is a moving one and as soon as a document is two years old [from the date of publication] it falls out of the database. The reason for creating the database in this way is that generally examiners' search reports cite documents that have been published in the two years immediately preceding the application or examination. A longer term view of patent documents can be found if one chooses esp@cenet's 'World Wide' database of 30 million documents, and puts e.g. 'insurance' in the title field and 'EP' in the publication field.

The applications were read first with a view to identifying the kind of business problems for which the industry was seeking solutions. Then the description and claims were read against a background of learned comment on the patentability of computer implemented inventions (Beresford 2000) and the relevant provisions of the EPC, the European Directive (2002/0047(COD)), granted patents, and European Patent Office Technical Board of Appeal decisions.

## **4. Business Method Patents: International Legal Background**

### **4.1 The United States**

Internationally, there is no consistent approach to business methods patents. The approach taken by the U.S. Patent and Trade Mark Office, following the decision in *State Street Bank & Trust Co. v Signature Financial Group, Inc.* 149 F.3d 1368), regarding U.S. Patent No. 5,193,056, is markedly different from that of the European Patent Office, and more permissive. In the U.S. a patent may be granted for any new, non-obvious invention that achieves a concrete, useful and tangible result (United States Code Title 35 - Patents, Part II, Ch. 10).

In July 1998, as a result of soured licence negotiations between State Street Bank and Signature Financial Group Inc, Signature's business method technology patent (U.S. Patent 5,192,056 the '056' patent) was challenged in the U.S. courts. In that key case, the patentability of a business method was subjected to detailed examination and debate. The U.S. Patent Act requires that where each component of a claim is recited as 'means + function' that will include 'equivalents'. So the court was able to construe claim 1 of the 056 patent as 'a machine, namely a data processing system for managing a financial services configuration of a portfolio established as a partnership' as proper statutory subject matter. Inclusion of 'any' in the Act, and 'machine' in both the Act and claim 1 of the patent were sufficient for the court to uphold patent 056. The court's decision confirmed the patentability of business methods so long as they produce a 'useful, concrete and tangible result'. As a result of the State Street Bank case, the eligibility of a business method to be granted a patent, at least in the United States, had been clarified.

The State Street decision triggered a general awareness that 'business method patents' are now available as a viable form of patent protection. As a result, the number of Internet business method patents claimed and filed with the USPTO has increased and will continue to do so. State Street clarified previous case law to establish that the business method patent should be treated the same as any other patent claim, requiring that it satisfy 35 U.S.C. § 101, § 102, § 103, and § 112 (Legal Information Institute, Cornell).

#### **4.2 Australia, Japan and Europe**

In Australia, changes to patent legislation were introduced in April 2002 to increase the presumption of validity of granted patents and bring Australian practice more into line with international standards. Australia has benefited from the adaptiveness and flexibility of the 'manner of manufacture' test of patentability, rather than the more prescriptive approach of e.g. the European Patent Office (Australian Advisory Council on Intellectual Property, 2002). The Japanese Patent Office in November 2000 published Policies concerning Business Method Patents (Japanese Patent Office, 2000) in which it aims to achieve consistent patentability between the Trilateral Offices: EPO, USPTO and JPO. In Europe, if a computer implemented invention produces a technical effect, a patent may be granted. But where there is no discernable technical effect, the European Patent Office has yet to make the policy decision whether it is appropriate to afford patent protection to innovations in methods of doing business.

#### **5. Inherently Unpatentable Innovations**

All patent regimes list innovations that are inherently unpatentable. Article 52 (2) EPC lists subject matter that will not be regarded as an invention, and which is incapable of qualifying for the grant of a European patent. 'schemes, rules and methods for performing mental acts, playing games or doing business and programs for computers' are unpatentable, but only to the extent that a monopoly is claimed in the subject matter 'as such'. Although the EPO routinely grants European patents for computer-implemented inventions, Art. 52 (2) (3) EPC excludes patents for a business method as such.

A patent application comprises an abstract, description, including drawings, and claims. What the claims define, and how they define it, determines the extent of the monopoly claimed. The description and drawings are used to interpret the claims. To obtain a

makes a technical contribution to the state of the art.

The EPC does not define what is meant by 'invention'. Art. 52 (2) EPC contains a non-exhaustive list of outcomes that shall not be regarded as inventions, being either abstract or non-technical. In considering whether the subject-matter of an application is an invention within the meaning of Art. 52 (1) there are two general points the patent examiner must bear in mind. First, exclusion from patentability under Art. 52 (2) applies only to the extent to which the application relates to the excluded subject-matter as such (Guidelines for Examination in the EPO, 2000). Second, the examiner should disregard the form or kind of claim and concentrate on its content in order to identify whether the claimed subject-matter, considered as a whole, has a technical character. If it does not, there is no invention within the meaning of Art. 52 (1).

### **5.1 Attempts to Patent the [Seemingly] Unpatentable**

Previous decisions of the European Patent Office's Board of Appeal have indicated that a technical contribution may arise if there has been some improvement in the way that processes are carried out or resources used in a computer.

Two EPO Board of Appeal Decisions, SOHEI and PENSION BENEFIT illustrate what has been deemed acceptable and unacceptable in the area of computer implemented business method patents.

### **5.2 Successful: T 92/0769 SOHEI**

In 1992 the examining division of the European Patent Office refused Sohei a patent for a general purpose computer management system. The reason for refusal was that in accordance with Art. 52 (2) and (3) EPC the subject matter of the independent method and system claimed could not be regarded as an invention within the meaning of Art. 52 (1) EPC.

The object of the invention was to provide an efficient data processing machine for accurately controlling the production of manufactured components with a minimum of manual intervention. The first claim referred to a computer system comprising different units, and other linked filing and processing means. The second claim referred to a method for operating the computer management system, referring to the automatic entry, display, handling and processing of data.

The Board of Appeal considered, among other things, whether abstract administration management e.g. personnel management can be equated with process management e.g. construction, or manufacturing management. In answering whether management of technical processes is equivalent to 'doing business?' [as in Art. 52 (2) (c)] they interpreted 'doing business' narrowly. They considered the system of Claim 1 and the method of Claim 2 to involve technical consideration resulting in technical contribution to the art, such that the system and method should not be excluded from patentability. As a result, Sohei's patent EP0209907 B1 was granted in 1996.

### **5.3 Unsuccessful: T 0931/95-3.2.1 PENSION BENEFIT SYSTEMS PARTNERSHIP**

In September 2000, the Technical Board of Appeal of the European Patent Office refused an appeal (T 0931/95 - 3.5.1), by Pension Benefit Systems Partnership, against a decision in 1995 not to grant a European patent in respect of a method of controlling a pension benefits program (EP 88302239.4). For an invention to be an invention within Art.52 (1) of the EPC, technical character is an implicit requirement. As a result, methods involving only economic concepts and practices of doing business cannot be inventions. The Appeal Board considered whether the method, according to claim 1 of the patent applied for, represented a method of doing business as such. If the method were technical, or had a technical character, it might have succeeded. Claim 1 read as follows:

'1. A method of controlling a pension benefits program by administering at least one subscriber employer account on behalf of each subscriber employer account on behalf of each subscriber employer's enrolled employees each of whom is to receive periodic benefits payments, said method comprising: providing to a data processing means information from each said subscriber employer defining the number, earnings and ages of all enrolled employees of the said subscriber employer; determining the average age of all enrolled employees by average computing means; determining the periodic cost of life insurance for all enrolled employees of said subscriber employer by life insurance cost computing means; and estimating all administrative, legal, trustee, and government premium yearly expenses for said subscriber employer by administrative cost computing means; the method producing, in us, information defining each subscriber employer's periodic monetary contribution to a master trust, the face amount of a life insurance policy on each enrolled employee's life to be purchased from a life insurer and assigned to the master trust and to be maintained in full force and effect until the death of the said employee, and periodic benefits to be received by each enrolled employee upon death, disability or retirement'.

Claim 5 described the apparatus involved in working the invention.

5. An apparatus for controlling a pension benefits system comprising: a data processing means which is arranged to receive information into a memory from each subscriber employer defining the number, earnings and ages of all enrolled employees, said data processing means including a processor which includes:

A. average computing means for determining average age of all enrolled employees;

B. life insurance cost computing means for determining the periodic cost of said life insurance for all enrolled employees of said subscriber employer;

C. administrative cost computing means for estimating all administrative, legal, trustee, and government premium yearly expenses for said subscriber employer; the apparatus being arranged to produce, in use, information defining each subscriber employer's monetary contribution to a master trust by a life insurer on the life of each enrolled employee and to be maintained in full force and effect until the death of the said employee; and periodic benefits payable by said master trust to each enrolled employee upon death, disability, or retirement.

The question of law to be considered was whether the 'technical' requirement was satisfied by the computerized activities of the actuarial profession working in an industrial context? The appellant [Pension Benefit Systems Partnership] argued that 'a distinction should be made between 'doing business' in terms of Article 52 (2) [c] EPC and the present invention, which consisted of a technical tool serving an actuary when doing her job in the industry of business and fund management. Furthermore the claims were directed to the processing of data which were related to physical entities, as was the case in VICOM, and thus not directed to a pension system 'as such' so that in the light of Article 52 (3) EPC the exclusion provisions did not apply'. This insistence on 'technical effect', in the absence of any clarification of what is meant by the phrase, has been noted by critics of the European position 'preferring ambiguity to allow some business method patents to issue while having a political shield' (Aharonian, 2001).

In addition the applicant argued that 'technical character' was not set up by the European Patent Convention as a requirement for patentability. The interpretation of the term 'technical' as applied in the present case was outdated and did not correspond to the ordinary meaning of this term. The Board of Appeal considered the method claim [claim 1] and found that apart from various computing means mentioned in that claim, it was directed to a 'method for controlling a pension benefits program by administering at least one subscriber employer account'. It found all the features of the claim to be 'steps of processing and producing information having purely administrative, actuarial and/or financial character. Processing and producing such information are typical steps of business



doing business as such. As a result, it was excluded from patentability under a combination of Articles 52 (2) (c) and 52 (3) EPC. Claim 1 therefore did not define an invention within the meaning of Article 52 (1) EPC. In addition, the Board found that as the improvement envisaged by the invention lay, according to the application, in the economic field it could not contribute to inventive step. The only aspect of the application that could be considered to contribute to inventive step was the programming of a computer system to carry out the invention. This meant that it would be a computer programmer, rather than an actuary, whose opinion as 'person skilled in the art' would be sought to determine whether or not there was an inventive step. The application was rejected, as was leave to appeal to an Enlarged Board of Appeal of the European Patent Office.

The Pension Benefit appeal failed because 'their business method did not produce a technical effect'. The invention as claimed did not go beyond a method of doing business as such, and therefore was excluded from patentability. The description of the scheme 'contained very little indeed as to how the scheme might be implemented on a computer. Although the scheme itself might have been unique, there was therefore nothing in the description of its implementation that could be said to be other than entirely standard. As far as the apparatus claims were concerned, the Board disallowed them, not because they were merely a method of doing business, but because the apparatus was not considered inventive' (OJ 1987, 14 VICOM).

The Appeal Board Decisions give valuable insight into the patentability of any particular invention, as disclosed in its specification. Perhaps [esp@cenet](mailto:esp@cenet) would give thought to including full text and digest summary reports of decisions, to assist the novice user of the patent appraise the patentability of his invention.

#### **5.4 COM (2002) 92 Final 2002/0047 (COD) Proposed European Parliament and Council Directive on the Patentability of Computer-Implemented Inventions**

The proposed EU Directive on the patentability of computer-implemented inventions defines a 'technical contribution' as a 'contribution to the state of the art in a technical field which is not obvious to a person skilled in the art'. The EU acknowledges the impossibility of spelling out the meaning of 'technical' in fine detail, because the very nature of the patent system is to protect what is novel and therefore not previously known (Marshall J and Thornham C, 2001).

Article 4 of the Directive creates a two step requirement for patentability of computer-implemented inventions. There must be inventive step, if, having regard to the state of the art, the invention is not obvious to a person skilled in the art AND it must make a technical contribution. A computer-implemented invention, in which the contribution to the prior art does not have a technical character will be considered to lack inventive step even if the [non-technical] contribution to the prior art is not obvious. In determining technical contribution, the invention must be seen as a whole: examiners will not expect to 'weigh' the technical and non-technical features in an attempt to determine which aspect makes the more important contribution to the invention's success.

The UK Patent Office suggests [www.patent.gov.uk/about/ippd/issues/software.htm](http://www.patent.gov.uk/about/ippd/issues/software.htm) that inventions should not be regarded as making a technological contribution merely because they use or are used by technological devices [or processes] such as a tool, computer or communications system.

### **6. INSURANCE INDUSTRY PATENT APPLICATIONS**

SOHEI and PENSION BENEFITS decisions [see above] serve each as a good example, respectively, of the way in which:

- technical contribution [notwithstanding in the context of a business method, albeit

interpreted narrowly] can lead to a patent; and

- a business method with no technical contribution will lead to no patent.

The following two granted patents are offered as examples of successful applications for insurance industry related computer implemented inventions.

### **6.1 EP 0701717 B1 Method and Apparatus Relating to the Formulation and Trading of Risk Management Contracts**

The problem addressed by this invention concerns the ability to insure against future unpredictable outcomes. For example, a manufacturer of integrated circuits may wish to insure against batches of circuits failing to perform up to specified quality control criteria; or fluctuations in share price. Currently systems for dealing with unknown future outcomes are limited and the only way to obtain insurance for a wide variety of outcomes is by entering into a large number of separate contracts for each of the individual outcomes. The invention provides a communication apparatus for enabling first and second parties to enter a contract related to a future event having a number of possible quantifiable outcomes.

The main claims describe a computer apparatus [claim 1] and a communication apparatus [claim 2], comprising a number of terminals comprising data processing means. Each pendant claim commences with reference to 'an apparatus'. The patent was granted on 05.04.2000.

### **6.2 GB 2323060 Pre-Paid Card of Damage Insurance**

The problem addressed by this invention was that it was impossible to prepay an insurance premium, or to gift the cost of a premium to a third party. The invention is of a prepaid card of damage insurance, capable of contracting a damage insurance, usable as a gift and capable of selling massively. The card shows the insurance type, insured amount, premium payment, insurance period and insured person's personal details. The reverse has columns for magnetic recording, insurance outline, barcode and details of the insurance company. It allows for the premium payer and the insured to be different people. The premium may be paid before the insurance contract commences, with the insurance company being informed when the insured activity, such as engaging in a sports activity, is about to commence.

All claims refer to 'a card' holding manually recorded and magnetically recorded, machine readable information. The patent was granted 29.06.1999.

### **6.3 Seven Patent Applications Reviewed**

The following seven applications were retrieved from an esp@cenet search of the European Patent Office collection placing 'insurance' in the simple text box of the search menu. None appears yet to have been granted. Of the seven applications, three may have ground to a halt as a result of the international search process. The seven applicants were GE Frankona Management Service (GmbH DE EP 1115075), The Scottish Provident Institution (UK EP 1081623), Hukaru Ishii, Tokyo (JP EP 1152360), Progressive DirecTrac Service Corp (US EP 1160707), Dynavision (NL EP 1081618), Volvo Commercial Finance (LLC US EP 1145162), Greg Dillard (US EP 1214674).

Of the seven applications reviewed, four [EP 1115075, EP 1160707, EP 1145162, and 1214674] had a US priority date. This meant that the applicant had already disclosed the innovation, to the United States Patent & Trade Marks office, where the hurdle for patenting a method of doing business is lower than in Europe.

#### **6.3.1 EP 1081618**

'Insurance by the pound' ['verzekern per Kilo'] proposes a damage insurance product wherein for all an insured's material damage risks to be insured an integral contribution is calculated on the basis of a number of characteristics, including the insured's family situation, profession, real property, post code, age and annual income. The invention offers the insurance company the opportunity to design and maintain a service centre for its clients, to answer such f.a.q.s as 'how can I protect my home?' The insurer can be tied in with repair outlets, so that it does not have to reimburse replacement value.

Claims are for a system for making a damage insurance form comprising data storage, processing, and display; that can calculate contribution, print a certificate or form. By claiming a system, rather than an apparatus, it doesn't appear to disclose an invention giving technical effect.

Setting the claims against the criteria identified by Beresford (2000) begs the question is 'respective calculating-hardware means and respective software operating means' sufficiently enabling disclosure for a patent to be granted

### **6.3.2 EP 1214674**

An apparatus and method for providing collateral construction loan insurance. The EPO search report found a document of particular relevance, such that the claimed invention could not be considered novel or to involve an inventive step.

### **6.3.3 EP 1160707**

A monitoring system for determining and communicating a cost of insurance. A problem in motor insurance is determining the factors that identify the actuarial class of the insured, especially when the information is given in interview and is not easily verified. Information given does not necessarily predict the manner of future safe operation of the vehicle. The proposed solution involves internet on-line communication by the insured to the insurer of details relevant to the operation of the vehicle, including speed of vehicle, miles driven, time of use, over a selected period of time; and identify of user. The data recording process could easily be integrated in the vehicle's electronics. In sum: an integrated system to extract via multiple sensors, screen aggregate and apply for insurance rating purposes, data generated by the actual operation of the specific vehicle and the insured user/driver.

What is claimed for this invention:

1. a method of communicating a cost of insuring a unit of risk and corresponding operating characteristics for the unit monitored for a selected period, comprising steps of:  
providing a Web site system for communicating data between an insurer and an insured relative to the unit of risk;  
monitoring the operating characteristics during the selected period  
deciding the cost of insuring ...  
selectively communicating the monitored operating characteristics...

10. a system for internet on-line communicating between an insurer and insured

Again, human beings intrude into the claims in the person of the 'insurer' and the 'insured'.

A Search Division report on this application found that the claims related to subject matter excluded from patentability under Art. 52 (2) and (3) EPC. The examiner could not establish any technical problem that might potentially have required an inventive step to overcome. Hence, it was not possible to carry out a meaningful search into the state of the art, and unlikely the patent would be granted.

### **6.3.4 EP 1152360**

A medical insurance system wherein disclosure of pre-existing conditions is appropriately

where the insured does not disclose sufficiently all the details pertaining to pre-existing conditions. The proposed solution is an invention whereby the insured agrees that on creation of the insurance contract, personal medical data can be obtained by the insurer from medical facility databases, details of physical examination or prior diagnosis of illness. Benefits for the insured include the possibility of reducing the percentage of exclusions, because pre-existing conditions have been fully disclosed; and better treatment if at a remote location because the remote medical treatment centre could access the details held on the insurer's database.

The claims describe a medical insurance system comprising a database where disclosure of preexisting conditions is regarded as completed only when medical data has been stored in it, that data being obtainable from remote medical facilities, and available to the insurer and other remote medical facilities, and can be stored in a portable health data system.

Whilst this sounds to the author a good, if somewhat intrusive, idea, it is difficult to discern the technical contribution made by this invention, or to have confidence in its patentability.

### **6.3.5 EP 1145162**

A method and system for real-time contracts, administration, and financial control to process electronic credit applications and insurance via a global communications network. A need exists for point-of-sale credit application processes to solve the problems of manual entry of data for obtaining insurance and financing deals associated with vehicle sale and purchase. The proposed invention would provide additional flexibility and functionality in the management of credit application and insurance processes.

In the invention, instead of manually filling out forms and faxing or mailing them a credit application is created in an electronic transfer medium, such as a remote terminal that accesses the internet can connect to a financial institution's communications network.

What is claimed [claims 1-12] is a system for processing contractual, administrative, and/or financial records, relating to a transaction. The system comprises a computing device having a memory, a database accessible by the computing device, a database processor, at least one deal module, an interface and a network. Claims 13 - 21 set out methods for obtaining and evaluating data, inputting and evaluating deal attributes, display of data, means of providing a help mechanism to a user, via web page.

The EPO reported that no international search report would be established on this application because the subject matter of the international application related to schemes, rules or methods of doing business, which is unpatentable subject matter.

### **6.3.6 EP 1115075**

A method, computer program and system for interactive selling of insurance including reinsurance. The historical method of marketing or selling insurance, including reinsurance, limits the ability of the insurer to be proactive in its effort to sell its insurance services and often results in inefficiencies in utilization of the insurer's capacity. It is an object of the invention to provide a method, a computer program and a system for assuming/ceding monetary risks more efficiently, which is suitable in particular for interactive selling of reinsurance.

The language of the claims discloses 'steps' and 'methods' to allow 'representations' by 'representatives such as brokers' rather than the 'technical contribution' required for patentability by the EPC. Claim 13 is a main claim for 'a data processing system', which would suggest a possible technical contribution. Had the claims been written with more with the requirements of the EPC in mind, this application might be more assured of success.

### **6.3.7 EP 1081623**

Method for insurance product provision. A benefit for the insurance industry would be if one company could provide a menu of benefits from which the insured could devise a policy, removing the need to have multiple, overlapping cover from different providers. The invention described is a method of insurance product provision for customers, which gives customers choice of which benefits to take up, and how benefits should be paid out.

Almost each of the claims makes reference to the customer and the role of customer choice. There is no reference to any technical consideration, such as the computer system necessary to enable the invented method to work. The description describes the 'steps' to achieve the method, rather than a product or process. It appears an unlikely application to succeed, being a business method that lacks technical contribution.

A search report on EP 1081623's UK equivalent GB 2358498 cited EP 0955595 [which had 'insurance' in the title, but was not retrieved in the esp@cenet search] as an anticipatory document, category A, indicating technological background and/or state of the art. The claims of EP1081623 define non-technical functions including 'presenting the identified benefits to the client and enabling the client to choose which benefits to adopt within the policy plan'. There is no mention in the claims of the technical equipment or software necessary to give the client the ability to choose which benefits to adopt. The claims for EP0955595, however, define a data processing apparatus that would generate the information on which a client will eventually make their choice.

## **7. Conclusions**

The patent applications retrieved from esp@cenet for this paper demonstrate innovative attempts to solve real business problems for the insurance industry. Thought, research and development have been invested in devising the solutions described in the applications. It is probable that any one of the solutions might have been greeted as satisfying a long felt want in the industry, and have commercial potential. But from the patent applications reviewed, it would be difficult for the patent novice to predict which, if any, of the solutions would result in a European patent monopoly for its inventor. 'Reviewing patent applications' does not appear to be an efficient way of helping the patent novice to decide whether or not to take the risk of choosing the patent route as a way of protecting an innovative computer implemented business solution. If esp@cenet carried summary digests of cases, including EPO Technical Board of Appeal decisions, that might assist.

By choosing to disclose their solution to the public through the medium of the patent application, innovators take a gamble. Winning means a commercially exploitable patent, losing means contributing a solution to the industry at large, with no expectation of commercial recompense - unless by choosing not to keep the innovation under wraps, the innovator spoils a competitor's chance to obtain patent protection. Four of the seven applications reviewed had made a US Patent & Trade Mark Office application prior to their European Patent Office application. With a higher chance of 'winning' a US patent, their disclosure was less of a gamble.

From 1996-1999, the Economic and Social Research Council, with additional funding from the Department of Trade and Industry and the Intellectual Property Institute commissioned a major research project on how industry sees protection of its intellectual property. One finding was that the patent system generally makes no contribution of any importance to the innovation of SMEs. The greatest use by far that SMEs make of patent information is to satisfy the demands not of innovation, but of the patent system itself. They use patent information to check for patent infringement (ESRC, 1998). Could that be because the patent system does not provide the information SME's and patent novices want?

In the currently confused and confusing area of computer implemented business method innovations, where is the patent novice to find useful information about the patentability 'as such' of inventions? If patent specifications provide innovators with a potentially valuable

risk of disclosing the business innovation through the patent system? Perhaps these are questions to be asked by patent information providers, such as esp@cenet if they are to give their service added value.

### **Notes and References**

1. Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and extension states of Albania, Latvia, Lithuania, Macedonia, Romania and Slovenia.

2. The explanation of the 'two year window' was supplied on request via email by Dr. Nigel Clarke of the European Patent Office [04.03.03] It would add to the utility of esp@cenet of such information about the design of the database were more readily accessible.

### **Books, Magazine and Journal Articles**

Australian Advisory Council on Intellectual Property Patenting of Business Systems issues September 2002, p. 12.

Beresford, K Patenting Software under the European Patent Convention  
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Vicom/Computer-related invention (1987) 1 OJEP 14, Official Journal of the European Patent Office.

Laurie R and Beyers B The Patentability of Internet Business Methods: A Systematic Approach to Evaluating Obviousness The Journal of Internet Law (2001).

Marshall J and Thornham C Business Method Patenting in Europe(2001) Intellectual Property Review.

Reid, B A Practical Guide to Patent Law Sweet & Maxwell 1999.

### **Cases**

State Street Bank & Trust Co. v Signature Financial Group, Inc. 149 F.3d 1368.

EPO Board of Appeal Decision T 0931/95 - 3.2.1 PENSION BENEFIT SYSTEMS PARTNERSHIP.

EPO Board of Appeal Decision T 08/84 Computer-related invention/VICOM.

EPO Board of Appeal Decision T 92/0769 SOHEI.

### **Granted Patents**

U.S. Patent No. 5,193,056

EP 0209907 B1

EP 0701717 B1

GB 2323060

### **Patent Applications**

DE EP 1115075

UK EP 1081623

JP EP 1152360

US EP 1160707

NL EP 1081618

US EP 1145162

US EP 1214674

### **Legislation**

Patent Act 1977 s14 (3).

Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions Brussels, 20.02.2002 COM (2002) 92 final 2002/0047 (COD).

The 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights [The TRIPS Agreement] Article 27.

The European Patent Convention Article 52 (1), (2), and (3).

U.S. Patent Act - Title 35 United States Code, ch. 10.

### **Links to Uniform Resource Locators (URLs)**

<[www.european-patent-office.org/espacenet/info/access.htm](http://www.european-patent-office.org/espacenet/info/access.htm)>

<<http://www.european-patent-office.org/espacenet/info/>>

<<http://www.european-patent-office.org/patlib/patlib99/presentations/vdulken2.pdf>>

<[www.delphion.com](http://www.delphion.com)>

< <http://www.law.cornell.edu/bulletin/sp/bizmethod/disc.htm>> (Legal Information Institute, Cornell University)

<<http://www.jpo.go.jp/infor/tt1211-056.htm>>

<[www.bustpatents.com](http://www.bustpatents.com)> (electronic newsletter 02 November 2001)

<[www.europa.eu.int/comm/internal\\_market/en/indprop/02-32.htm](http://www.europa.eu.int/comm/internal_market/en/indprop/02-32.htm)>

<[www.patent.gov.uk/about/ippd/issues/software.htm](http://www.patent.gov.uk/about/ippd/issues/software.htm)>

<[www.european-patent-office.org](http://www.european-patent-office.org)>

<<http://info.sm.umist.ac.uk/esrcip/Projects/L5253021/Final%20Report.htm#top>> (ESRC, 1998)

< <http://www.lawcouncil.asn.au/sublist.html?section=BLS&year=2002>>

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