Commissioner's Decision #1245
Décision du Commissaire #1245

TOPIC: J10
SUJET: J10

Application No: 564,175
Demande No: 564,175

COMMISSIONER'S DECISION SUMMARY

C.D. 1245 ....Application No. 564,175 (J10)

Application refused as being directed to unpatentable subject matter.

The application relates to a personal financial management system which incorporates means of implementing, coordinating, supervising, analyzing and reporting upon investments in an array of asset accounts and credit facilities within a client account. The Examiner refused the application as being directed to non-patentable subject matter since it was held that the invention was directed to the mere computerization of a method that could be carried out manually. The Board recommended that the rejection of the application be upheld, a recommendation which was accepted by the Commissioner of Patents.

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 564,175 having been rejected under Rule 30 (4) of the Patent Rules, the Applicant asked that the Final Action of the Examiner be reviewed. The rejection has consequently been considered by the Patent Appeal Board and by the Commissioner of Patents. The findings of the Board and the ruling of the Commissioner are as follows:

Agent for Applicant

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This decision deals with the Applicant's request for a review by the Commissioner of Patents of the Examiner's Final Action dated February 22, 1996, on application number 564,175 (Class 354-41), filed on April 14, 1988 and entitled "SYSTEM FOR THE OPERATION OF A FINANCIAL ACCOUNT". The inventor is Charles A. Atkins. At the Applicant=s request, the Patent Appeal Board conducted a hearing on January 6, 1999, at which time the applicant was represented by Mr David Aitken of the firm of Osler, Hoskin & Harcourt and Mr Frank E. Morris of the firm of Pennie & Edmonds of New York, New York, U.S.A.. The Patent Office was represented by Mr Bruce McCalla, the Examiner in charge of the application and Mr Peter Ebsen, Section Head.

The application relates to a personal financial management system which incorporates means of implementing, coordinating, supervising, analyzing and reporting upon investments in an array of asset accounts and credit facilities within a client account. Figure 1 of the application shows the basic structure of the financial management system of the application.

Referring to figure 1, the central operating account of the system is the Home Owner=s Preferred Equity (HOPE) account 10. All transactions are implemented through this account and all reports to the client are provided from this account. The system is started when the client secures a mortgage against one or more of his/her homes 14 and one or more other assets 16. The client makes interest payments on the mortgage but some or all of the money which would normally be used to amortize the mortgage is, instead, contributed to another type of investment. The Net Equity Total (NET) 20 is the sum of all assets 16 and the sum of all liabilities 18, excluding the value of the client=s home 14 and mortgage 12. There are various checks performed by the operating system to ensure that the value of the client=s assets always equals or exceeds a minimum amount in order to protect the mortgage lender. If the asset value drops below the minimum amount and no corrective action is taken, assets are liquidated.

The Examiner, in his Final Action rejected the application as being directed to non patentable subject matter. In the Final Action, the Examiner stated, in part, that:

> The Patent Office is bound by the last court decision of Schlumberger vs. The Commissioner of Patents in which the stand taken by the Commissioner was upheld. The court pronounced that the use of a computer in a previous manual system does not add or subtract to the patentability of the system. In other words, if the system could have been run manually, then just adding a computer to it does not necessarily render the system patentable.
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> .....
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> ... To be patented, the applicant must clearly show how by adding a computer to the system, new and unusual results are achieved that cannot be achieved by manual means. Consequently, if the system can be run manually, and it is also in the domain of traditionally non-patentable subject matter, then even with the computer, it is still unpatentable.

The Applicant replied to the Final Action on August 22, 1996. In that reply, the Applicant stated, at page 4, that:

> ... the Examiner sets forth a two-part test to determine whether an invention falls within the realm of non-patentable subject matter: (1) the system can be run manually, and (2) the system is in the domain of traditionally non-patentable subject matter.
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> Applicant=s system cannot be run manually. Through the use of a computer optimization function comprising complex mathematical programs, the system is capable of determining the optimal distribution of funds received into a client account on a periodic or even a continuous basis. In this way, the client may maximize profits. Moreover, the computer is capable of processing and supervising a myriad of client accounts, such as all client accounts in a bank or even in many banks though a network such as the Internet. Clearly, it would be impossible to manually calculate an optimal distribution of funds on a continuous basis for a large number of accounts. Thus, it is apparent that Applicant=s system is not merely a manual system implemented on a computer.
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> Applicant=s invention also falls within the scope of traditionally patentable subject matter as defined by the Guidelines. The Canadian Manual of Patent Office Practice, '12.03 captioned APrerequisites of a Patentable Invention@ sets forth six criteria of patentability as follows:
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> > (a) whether the subject matter relates to a useful art (as distinct from a fine art where the result produced is solely the exercise of personal skills, mental reasoning or judgment, or has only intellectual meaning or aesthetic appeal);
> > (b) whether the subject matter is operable, controllable and reproducible by the means described by the inventor so that the desired result inevitably follows whenever it is worked;
> > (c) whether the subject matter has practical application in industry, trade or commerce;
> > (d) whether it has a licit object in view;
> > (e) whether it is more than a mere scientific principle or abstract theorem; and
> > (f) whether it is beneficial to the public.

The Applicant then went on the analyse the invention described in the instant application and arrived at the conclusion that it meets each and every one of these criteria.

In a MEMORANDUM OF ORAL ARGUMENT which was presented to the Patent Appeal Board at the hearing, the Applicant reduced the issues to two questions:

> 1. Does the computer related aspect of the claimed invention render it non-statutory subject matter?
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> 2. Is the invention a method of doing business and therefor non-statutory subject matter?

At the hearing, Mr. Aitken explained that the answers to each of the above noted questions is no. As well, THE MEMORANDUM OF ORAL ARGUMENT emphasized that the Applicant=s system, while including a computer which carries out calculations, also has as a very important feature, the step of allocating funds in an optimized manner. It was argued that this fund allocation step distinguishes the Applicant=s system from other systems which only do calculating and give a mere presentation of the results of those calculations.

Claim 1 reads as follows:

> A data processing system for processing and supervising a plurality of client accounts comprising:
> a processing means;
> terminal means connected to the processing means for input and output of information from the processing means;
> memory means connected to the processing means for the storage of data files and information pertaining to each client account, each client account comprising a plurality of sub-accounts comprising at least one type of asset account and one type of liability account, said liability account including a loan secured by a lien on at least one residence of the client and one or more of his asset accounts;
> means for establishing for each client account a minimum present borrowing power and an expected minimum future borrowing power at a specified time in the future;
> program means stored in said memory means for allocating funds received by a client account to pay interest on the loan secured by the lien with at least a portion of the remainder of funds received being used to increase an asset account in said client account rather than amortize the loan secured by the lien; and
> program means stored in said memory means for checking that a present borrowing power and an expected future borrowing power for each client account is at least equal to respectively the minimum present borrowing power and the minimum future borrowing power established for that client account.

Applicant=s reply of August 22, 1996 also requested permission to amend the application by cancelling the three claims on file (including the above claim) and substituting three new claims.

Claim 1 of the proposed claims reads as follows:

> A computer-based system for operating a plurality of client accounts comprising:
> processing means;
> memory means connected to said processing means for storing information pertaining to the account(s);
> means for maintaining on said computer system a database comprising for each client account at least one investment asset account which receives funds for investment purposes and has an account balance that is periodically updated and at least one liability account including a loan;
> means cooperating with said processing means for generating for each client account an optimized allocation of received funds to said investment asset account(s) and said liability account(s) by utilizing a computerized financial optimization function;
> means for storing in said memory means for each client account the optimized allocation of received funds; and
> means cooperating with said processing means for allocating funds received for the benefit of a client account to pay interest on the loan, and using the remaining portion of said funds according to said optimized allocation of said funds.

At issue in this case is the question of whether the subject matter disclosed and claimed in this application falls within the definition of invention contained in Section 2 of the Patent Act. Section 2 states:

> "invention" means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of

matter.

The patentability of computer related inventions was discussed in Schlumberger Canada Ltd. v Commissioner of Patents (1982) 1 F.C. 845 where Pratte J stated

> In order to determine whether the application discloses a patentable invention, it is first necessary to determine what, according to the application, has been discovered. Now it is obvious, I think, that there is nothing new in using computers to make calculations of the kind that are prescribed by the specifications. It is precisely in order to make that kind of calculation that computers were invented. What is new here is the discovery of the various calculations to be made and of the mathematical formulae to be used in making those calculations. If those calculations were not to be effected by computers but by men, the subject-matter of the application would clearly be mathematical formulae and a series of purely mental operations; as such, in my view, it would not be patentable..... I am of opinion that the fact that a computer is or should be used to implement discovery does not change the nature of that discovery. What the appellant claims as an invention here is merely the discovery that by making certain calculations according to certain formulae, useful information could be extracted from certain measurements. This is not, in my view, an invention within the meaning of s. 2.

Following this decision, the Board must first determine what, according to the application, has been discovered.

In reviewing the disclosure, it is noted that on page 16 the Applicant has described the hardware that is required to carry out the proposed system. The Applicant has given examples of specific models of computers which can perform the individual tasks in an acceptable manner, depending on the number of client accounts and the size of each account. There is no mention of any hardware components which the Applicant considers to include inventive features.

Therefore, the Board concludes that the Applicant=s discovery lies in various steps, such as Aestablishing borrowing powers@ and Achecking borrowing powers@. These steps involve performing calculations on various input parameters in order to arrive at output parameters. All of these calculations are aimed at the goal of generating increased revenues for the client and the banking institution operating the system. There appears to be no dispute between the Applicant and the Examiner that, up to this point, the system consists of a general purpose computer which is programmed to perform calculations on input data in order to give output data.

However, as mentioned above, the Applicant places emphasis on the fact that a further step of its system is the allocation of funds to investment and liability accounts using a computerized financial optimization function.

During mortgage application and approval, the client completes the Priority Asset and Liability Allocation Process (PALAP). The client is presented with several menus which allow decisions to be made concerning the client=s investment goals and tolerance to risk. The client can accept choices which are made by the computer system as a default set of constraints or he/she can choose to input information manually. The computer system is programmed to make investment choices in the same manner as a financial planner would using his/her professional skills and knowledge.

Once the information is completed, the system calculates the optimum allocation of funds for the constraints chosen. The client then has the opportunity to modify some of the input information

and the optimization calculation is carried out once again. This continues until the client is satisfied with the results.

The system which carries out the process of fund allocation is described on page 32 of the disclosure. Throughout the description, there is no indication that fund allocation is carried out automatically, as the Applicant has suggested in its submissions to the Board. Fund allocation is initiated by the client and is carried out only after the system has performed calculations to ensure that the asset and liability accounts remain within the limits which have been set by the mortgage lender and economic conditions. Fund allocation decisions are made by the system computer on the same basis as a financial advisor in a traditional, non-computerized investment situation.

This analysis leads the Board to the conclusion that the Applicant=s system is one which performs calculations based on mathematical formulae, which in turn, have been developed utilizing the professional skills of financial experts. The results of these calculations are then used as a guide for the client in maximizing investment earnings and as a control system for the lending institution to minimize the possibility of losses.

It is well established that professional skills are not patentable subject matter. In Lawson v. The Commissioner of Patents, 62 C.P.R., 101 at 110, Cattanach J. stated

> *In National Research Development Corporation's Application (Australia)*, [1961] R.P.C. 135, Dixon, C.J., said at p. 145:
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> > The point is that a process, to fall within the limits of patentability which the context of the Statute of Monopolies has supplied, must be one that offers some advantage which is material, in the sense that the process belongs to a useful art as distinct from a fine art (see *Virginia-Carolina Chemical Corporation's Application* [1958] R.P.C. 35 at p. 36) -- that its value to the country is in the field of economic endeavour. (The exclusion of methods of surgery and other processes for treating the human body may well lie outside the concept of invention because the whole subject is conceived as essentially non-economic: see *Maeder v. Busch* (1938), 59 C.L.R. 684 at p. 706.)
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> It is obvious from the concluding portion of the above quotation that professional skills are not the subject-matter of a patent. If a surgeon were to devise a method of performing a certain type of operation he cannot obtain an exclusive property or privilege therein. Neither can a barrister who has devised a particular method of cross-examination or advocacy obtain a monopoly thereof so as to require imitators or followers of his methods to obtain a licence from him.

The Board concludes that the Applicant has substituted a computer which has been programmed in a specific manner to make decisions which were formerly made by a financial advisor. As a result of this substitution, professional skill, which is not patentable when practised by an individual, is being provided via a computer which has been programmed to make use of the same input information to arrive at the same decisions. An operation which is not patentable when carried out by an individual cannot be made patentable merely by having it carried out by a computer.

Since the application is directed to a discovery which does not fall within the definition of invention and the use of a computer to implement that discovery does not change its nature, the Board concludes that the applicant's system does not fall within the ambit of Section 2 of the Patent Act.

The Applicant has also stated that its system cannot be run manually because it would be impossible to do all of the calculations on a continuous basis for a myriad of client accounts. It is evident that computer systems have been developed to perform calculations quickly and

accurately. However, computers do not do calculations which cannot be done manually. Computers solve problems by following a set of instructions (a program) which, if followed by a human, would allow for manual solving of the same problem. Of course the Board recognizes that because of the complexity of the calculations and the volume of the input data, doing these calculation manually would be completely impractical.

This leads the Board to the conclusion that the Applicant=s system is nothing more than a computer which is programmed to carry out a set of calculations and as was stated by Pratte J. AIt is precisely in order to make that kind of calculation that computers were invented.@

The Board would also like to comment on the Applicant=s statement that the Examiner has set forth a two-part test to determine if an invention falls within the realm of non-patentable subject matter, ie. 1) the system can be run manually and 2) the system is in the domain of non-patentable subject matter. The Board is not aware of any such two-part test. In evaluating patentability, each application is examined on its own merits

Under Canadian patent law, there are several types of subject matter which are not considered to fall under the definition of invention contained in Section 2. The Examiner has given several examples during the prosecution and a more extensive list is given in Section 16.04 of the Manual of Patent Office Practice.

In summary, the Board recommends that the Examiner's rejection of the instant application for failing to satisfy the requirements of Section 2 of the Patent Act be upheld.

P.J. Davies	M. Howarth	M. Wilson
Chairman	Member	Member

I concur with the findings and the recommendation of the Patent Appeal Board. Accordingly, I refuse to grant a patent on this application. Under Section 41 of the Patent Act, the Applicant has six months within which to appeal my decision to the Federal Court of Canada.

P. Trépanier
Acting Commissioner of Patents

dated at Hull, Quebec
this 20th day of September 1999