BL O/246/06

5 September 2006

PATENTS ACT 1977

APPLICANT Winklevoss Technologies LLC

ISSUE Whether patent application number GB 0328766.1 complies with section 1(2)

HEARING OFFICER R C Kennell

DECISION

Introduction

1 Application GB 0328766.1 entitled "Method and system for determining benefits" was filed on 11 December 2003 claiming an earliest date of 17 December 2002. The application was published on 23 June 2004 as GB 2396455 A.

2 Throughout the substantive examination process the examiner maintained that the invention was excluded from patentability under section 1(2) of the Patents Act 1977 (the Act). After several rounds of correspondence between the examiner and the applicant's patent attorney, a hearing was arranged to decide the matter. In the event the applicant decided that it was not necessary to attend a formal hearing and asked that a decision be made on the papers. In particular they referred to the arguments made in their letter of 8 May 2006 submitting amended claims (to which the examiner responded on 1 June 2006).

The invention

3 The invention relates to a system and method for performing defined benefit (DB) pension calculations using an expression language. Calculation modules are coded using the expression language, and these calculation modules are then stored in a repository along with other data necessary to perform the calculations. The applicant alleges that because an expression language is used it is easier and quicker to update the system in the event of any changes (see particularly paragraphs 0006 – 0008, 0076 and 0101 of the application as filed). The summary provided in the application indicates the following benefits at paragraph 0008:

- Enables organisations to set up DB pension plans without entry point programming or exception rule coding and perform all calculations associated with a particular plan all but instantaneously.
- Enables a user to create provisions for a DB plan using an expression language, thereby enabling a user without programming language experience to create such provisions.
- Handles several post-employment benefit contingencies.
- Provides users with a complete set of diagnostic reports.

4 The latest claims are those accompanying the applicant's letter of 8 May 2006. Claim 1 now reads:

> "A system for performing benefit calculations, comprising:
> provider means for administering a benefit plan to a beneficiary; and
> calculation means for:
> receiving a request to perform a calculation for the benefit plan; and
> generating an output including a result associated with the calculation,
> wherein the system further comprises:
> setup means for enabling a user to generate provisions, via an expression language, for the benefit plan, the setup means including provision data generation means for generating provision data, the provision data including benefit definition data, representing defined benefit provisions encoded in the expression language;
> repository means for storing the provision data, and
> provision validation means for validating the provision data, and
> wherein the calculation means further comprises:
> access means for retrieving the provision data from the repository means in response to the request to perform a calculation; processing means for performing the calculation by processing expressions represented by the benefit definition data."

5 A further independent claim, claim 22, directed to a method for performing benefit calculations, is provided and is analogous to claim 1. Claim 24 is directed to a data carrier carrying code configured to cause a computer to carry out the method.

The law

6 It is not disputed that the invention as now claimed is novel and inventive in relation to the prior art cited by the examiner, particularly the applicant's press release of 10 September 2002 announcing its "ProAdmin" software with user-defined plan parameters. However, the examiner maintains in his letter of 1 June 2006 that the invention is excluded under section 1(2) of the Act in that it relates to a method of doing business, a mathematical method, a mental act or a program for a computer, as such. The relevant parts of section 1(2) read (emphasis added):

> "It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of –
> (a) a discovery, scientific theory or **mathematical method**;
> (b) … ;

(c) a **scheme, rule or method for performing a mental act**, playing a game **or doing business** or a **program for a computer**;

(d) … ;

but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act **only to the extent that a patent or application for a patent relates to that thing as such**."

7 It is common ground that the starting point for determining whether an invention falls within the exclusions of section 1(2) is now the two-stage test proposed by the Deputy Judge in *CFPH LLC's Application* [2005] EWHC 1589 (Pat), [2006] RPC 5 and accepted by the Patent Office in its notice of 29 July 2005 "Examining for patentability". This test can be summarized as

- Identify the advance in the art which is said to be new and not obvious (and susceptible of industrial application).

- Determine whether it is both new and not obvious (and susceptible of industrial application) under the description of an "invention" in the sense of Article 52 of the European Patent Convention – which section 1(2) reflects.

Arguments and analysis

The advance in the art – Step 1 of CFPH

8 The applicant maintains that the advance for the purposes of the *CFPH* test is:

> "The provision of set up means enabling the generation of data via an expression language, such that the data is encoded in the expression language; repository means for storing such data encoded in the expression language; and means for retrieving encoded data from the repository, and performing a calculation based upon the encoded data."

9 The applicant's fundamental contention is that there is patentable subject-matter because the invention provides a computer system which is configured differently at the technical level. Thus, it is central to the invention that information used to perform calculations is encoded using an expression language, and that encoded expressions are stored for later access as required; it is this entire framework which avoids the need, if the calculation rules change, to generate new computer program code in a high level programming language and subsequently compile that code. As they state in the letter of 8 May 2006, the invention "essentially provides a system with improved usability given that stored expressions avoid the need to recode data".

10 It is the applicant's submission that any invention providing a technical contribution cannot be excluded from patentability by virtue of section 1(2) of the Act; that this has always been a requirement of UK law; and that this is consistent with the current practice of the European Patent Office based on *Hitachi* (T 0258/03). Maintaining that the overriding precedent in the UK is still the decision of the Court of Appeal in *Fujitsu's Application* [1997] RPC 608, the

applicant submits that:

> "It is of course the case that Mr Prescott QC's decision in *CFPH* must be read so as to be consistent with the other Court Authorities. In particular, it must be borne in mind that when handing down judgment, Mr Prescott QC was bound by the decision of the Court of Appeal in Fujitsu under the doctrine of precedent under English Law. With this in mind, it is submitted that when considering the second step of Mr Prescott QC's two part test it must be the case that the question is answered in the positive (i.e. the invention is not excluded) where an invention provides a technical contribution."

11 Furthermore, they point out that in recent judgments both Pumfrey J (in *Halliburton*[1]*, Shopalotto*[2]*,* and *Inpro*[3]) and Kitchin J (in *Crawford*[4]) have emphasised that the correct test for patentability still involves the concept of "technical contribution" or "technical effect".

12 I do not think that I need to delve too deeply into this case law. As Kitchin J explains in *Crawford* at paragraph 11, in relation to *Fujitsu, CFPH* and *Halliburton*:

> "At the heart of all these decisions is the consistent principle that the inventor must make a contribution to the art (that is to say the invention must be new and not obvious) and that contribution must be of a technical nature (susceptible of industrial application and not within one of the areas excluded by Art 52(2))."

Further *CFPH* does not say that "technical contribution" is necessarily the wrong approach. In particular, at the end of paragraph 14 Mr Prescott QC says:

> "I am not claiming that it is wrong to decide cases with reference to the word 'technical'. It happens all the time. What I am saying is that it is not a panacea. It is a useful servant but a dangerous master."

13 In any case there is no disagreement, as I understand it, between the applicant and the examiner that a technical contribution is required. Rather the difference lies in whether the invention does provide such a contribution.

14 The examiner did not agree with the applicant's view of what constituted the advance made by the invention, believing this to be that the program calculating the calculations is written using an expression language rather than some other high level language. I therefore need to look more closely at this.

15 The applicant appears to be arguing that there is a "framework" comprising the set up means, the repository for storing encoded data and the means for retrieving data and performing calculations which together constitute and advance of a technical nature. However, as is clear from the system overview

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1 Halliburton v Smith International [2005] EWHC 1623 (Pat), [2006] RPC 2
2 Shopalotto.com Ltd's Application [2005] EWHC 2416 (Pat), [2006] RPC 7
3 Inpro Licensing SARL's Patent [2006] EWHC 70 (Pat), [2006] RPC 20
4 Crawford's Application [2005] EWHC 2417 (Pat), [2006] RPC 11

as described in paragraphs 0044 – 0067 with reference to Figures 2 and 3 in the application as filed, all these appear to be nothing more than conventional computer system features.

16 The applicant argues that when determining what constitutes the advance I should take an approach similar to the "problem and solution" approach employed by the EPO and identify distinguishing features between the claimed subject matter and the disclosure of the single closest prior art document. On this basis they say that the prior art disclosed in the specification did not involve a repository which stored data encoded using an expression language. However, whilst I accept that there may be cases where the problem and solution approach might provide a pointer to where the advance lies, I do not think it is necessarily the correct approach to take. It seems to me that the fact that the acknowledged prior art lacks some of the features of the claims goes essentially to novelty and does not of itself mean that they constitute non-obvious advances as required by step 1 of *CFPH*. I do not see this approach as being helpful in the present case, especially since the application does not actually identify any specific item which can be regarded as the single closest piece of prior art.

17 In assessing where the advance lies, I believe it to be settled law that regard should be had to the substance of the alleged invention rather than the form of the claims. The applicant accepts that the claims include non-technical features, specifically features relating to pensions schemes, but submits that this is immaterial to whether the invention is patentable having regard to the decision of the European Patent Office Board of Appeal in *Sohei* (T0769/92). In that case, as I read it, the Board accepted that claims to a computer system and method which contained technical features would not become excluded from patentability as relating merely to the excluded field of "doing business" by restricting them to the fields of financial and inventory management. However, I do not think this helps the applicant because I do not think the limitation of the claims to methods and systems for performing benefit calculations is an arbitrary limitation of the sort considered in *Sohei*.

18 Taking account of all the above factors, it seems to me that whether I take as the starting point the prior art as explained in the application or the nearest prior art document found by the examiner (the applicant's press release about the ProAdmin system), the advance lies in the use of an expression language to encode benefit data in a system for performing benefit calculations. I do not regard the other parts of the "framework" identified by the applicant as part of the advance; as I have indicated above these seem to be nothing more than the standard features of a computer system which would follow from the configuration of the system to include the use of an expression language.

Whether this advance is patentable – Step 2 of CFPH

19 Expression languages are, as the examiner has pointed out, a well-known methodology for writing programs. As is explained at paragraph 0056 of the application as filed, the expression language may be a lexicon of built-in or user-defined elements including various operators. It is disputed whether this

constitutes a form of macro language, but even if it is not I would agree with the examiner that this is a form of high level programming language.

20 I accept that there may well be advantages in using an expression language, but I do not think that they are enough in this case to make a technical contribution. The applicant points to the storage of expressions avoiding the need to recode data when the calculation rates change, but it is not clear to me why this should be the case and neither does it appear to be explained in the application. As the examiner has pointed out, even if the calculation rules change, the expression will still need to be recoded and for a computer to use the new expressions they will also need to be compiled. The process may well have been made quicker and easier, but I cannot see that there is any change of a technical nature in what is happening.

21 The applicant has referred to *Inpro* and to the recent decisions of the comptroller in *Sun Microsystems Inc* (BL O/057/06) and *ARM Limited* (BL O/066/06) to illustrate that it is the presence or absence of a technical contribution which is determinative and not just the use of a computer program to implement the invention. They argue that the advance in the present case has parallels with these cases, which were found to be patentable despite relating to computer programs.

22 In *Inpro*, where data was transmitted between a field computer and a proxy server to enable a field computer to browse the web and produce results substantially better than might be expected from such a device, Pumfrey J found that there was a technical effect in that computers were running faster and transmitting information more efficiently, albeit ultimately for the purpose of displaying part of that information. *Sun* related to a reduced set of Java® Bytecode instructions which allowed the Java Bytecode to be implemented on a wider variety of devices and it was this which provided the technical contribution – the computer program was merely a tool, being the most convenient means of implementing the invention. In *ARM*, a software compiler responded to input signals derived from a non-invasive trace unit coupled to processing apparatus in order to improve the effectiveness of the compilation process, and was found to provide a technical effect because the compiler was faster and more accurate, and able to adapt and improve in an iterative manner.

23 However, I am unable to identify any similar technical contribution in the present case. In my view, if there is any comparison to be made with *ARM* it lies in the fact that this case appears to provide a high level programming language which is compiled or translated into a lower level language. In *ARM* it was considered that such a function did not of itself provide any technical effect and was within the mental act exclusion of section 1(2)(c).

24 On the computer programs exclusion of section 1(2), paragraph 23 of *Sun* draws a distinction between inventions which relate to <u>how</u> a computer program is written or structured, and those which relate to <u>what</u> the program must do. This reflects the *CFPH* judgment at paragraph 104, where the Deputy Judge makes clear that the question to be asked is whether the

artefact or process is new and non-obvious merely because there is a computer program – and that if the answer is “yes” then the computer program is merely a tool and the invention is not really about computer programming. On this basis, the applicant argues that the use of a computer program is merely incidental and the invention lies in the “what”, not the “how”.

25 I do not agree. I agree with the examiner that the invention is really about what is happening at the program level. In my view the invention is not new and non-obvious merely because a computer program is being used to calculate benefit data

26 However, if I am wrong on that I would agree with the examiner that what the invention is doing is calculating benefits and would fall to be excluded under the mental act, business method or mathematical method exclusions. The applicant’s argument that the invention is about what the program is used for seems to me to run counter to their argument above that on the basis of *Sohei* the mention of the purpose of the calculations is an irrelevant limitation.

Conclusion

27 I do not therefore consider that the invention provides any contribution of a technical nature or any advance that that is new and non-obvious other than in an area excluded by section 1(2)(c). I have read the specification carefully but I cannot see anything which would provide a basis for a patentable invention. I therefore refuse the application under section 18(3).

Appeal

28 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

R C KENNELL
Deputy Director acting for the Comptroller