

21 July 2008

## PATENTS ACT 1977

APPLICANT                      Schlumberger Holdings Limited

ISSUE                            Whether patent application number  
   GB 0608389.3 complies with  
   sections 1(2) and 76(2)

HEARING OFFICER                John Rowlatt

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## DECISION

- 1 Patent application GB 0608389.3 was filed on 27 April 2006 in the name of Schlumberger Holdings Limited, entitled 'Method system and apparatus for accessing stored spatial data'. The application is the national phase under section 89 of a PCT application published as WO2005/033981, which has a priority date of 01 October 2003.
- 2 In the first substantive examination report of 29 September 2006, the examiner objected that the claims related to a mental act and to a program for a computer, based on the law as it stood at the time in the light of *CFPH*<sup>1</sup>. Further objections were raised relating to the claims lacking novelty and/or an inventive step, being unclear and inconsistent, being unsupported by the description and potentially conflicting with a corresponding European application.
- 3 Several rounds of correspondence resolved all of the issues other than that of patentability, during which time the test for patentability as set out in *CFPH* was superseded by the Court of Appeal judgment in *Aerotel/Macrossan*<sup>2</sup>. In the most recent examination report, dated 14 January 2008, the examiner assessed the patentability of the claims based on the four step test as set out in *Aerotel/Macrossan* and remained of the opinion that the claims were not patentable as they related to a program for a computer. A hearing was suggested at this stage if the applicant wished to pursue the application.

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<sup>1</sup> *CFPH LLC's Application* 2005 EWHC 1589 (Pat), [2006] RPC 5

<sup>2</sup> *Aerotel Ltd v Telco Holdings Ltd and Others and Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7

- 4 A response dated 10 March 2008 included a new set of claims which were considered by the examiner to introduce added subject matter. While the *Aerotel/Macrossan* test for patentability was not re-applied as a result of the added matter objection, the examiner stated that he remained of the opinion that the claims were excluded from patentability. His letter of 14 March 2008 informed the applicant that the case had been passed to a hearing officer and that a hearing would be arranged.
- 5 Two further sets of claims, with a letter dated 20 May 2008, were filed for consideration at hearing, the matter coming before me on 22 May 2008. Dr. Andrew Suckling, of Marks and Clerk, appeared for the applicant with Mr. Ben Widdows, the examiner, and Mr. Charles Jarman, assisting, also in attendance.
- 6 Dr. Suckling believed that the issue of added matter had been overcome by the amendments made to the two new sets of claims and Mr. Widdows, who had a brief opportunity to look at them, was of a preliminary view that this was the case. It was therefore agreed that I would proceed to hear the patentability issue on the basis that there was no objection to added matter, with the proviso that I would consider the issue fully when writing my decision.

### **The Application**

- 7 The application as originally filed related to an apparatus, method and system for accessing database attributes stored in a data base and in particular to an improved way of accessing stored spatial data or other attributes even if they were stored in a propriety manner. During the prosecution of the application the focus of the claims shifted towards an apparatus, method and system for determining the true vertical depth along a well.
- 8 The first set, Set A, comprises four independent claims which read:
1. *An apparatus for accessing data stored in a first database, comprising:  
a) a data access layer having a second database, the data access layer mapping visible attributes to database attributes in the first database, the second database having an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data using a usage rule and a building block; and  
b) an attribute pre-processing module for scanning a user request to see if the request includes the artificial attribute, receiving the artificial attribute from the second database, sending a request for a visual attribute to the data access layer, and which creates an artificial attribute post processor suitable for building a real attribute used in describing the well from a combination of the artificial attribute received from the attribute pre-processing module and a visible attribute received from the first database via the data access layer in response to the request.*

13. A method for accessing data stored in a first database comprising:

- a) receiving a request for stored data;
- b) scanning the request to see if the request seeks an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;
- c) receiving the artificial attribute from a second database;
- d) retrieving data required to build the artificial attribute into a real attribute used in describing the well; and
- e) using the retrieved data to build the real attribute.

26. A method for accessing data stored in a first database comprising:

- a) an attribute pre-processor receiving a request for stored data;
- b) the attribute pre-processor scanning the request to see if the request seeks an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;
- c) if the request seeks an artificial attribute, the attribute pre-processor receiving the artificial attribute from the second database, creating an artificial attribute post-processor, sending the artificial attribute to the artificial attribute post-processor, and sends a request for visible attributes to a data access layer;
- d) the data access layer sending a query to the first database for a database attribute, retrieves the database attributes, retrieves the visible attributes mapped to the database attribute, and send the visible attribute to the artificial attribute post-processor; and
- e) the artificial attribute post-processor creating a real attribute used in describing the well from the visible attribute and the artificial attribute received from the data access layer in response to the request, and sending the real attribute to an output.

27. A system for accessing data stored in a first database, comprising:

- a) a data access layer having a second database, the data access layer mapping visible attributes to database attributes in the first database, the second database having an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;
- b) an attribute pre-processing module for scanning a user request to see if the request includes the artificial attribute, receiving the artificial attribute from the second database and sending a request for a visual attribute to the data access layer;
- c) an artificial attribute post processor created by the attribute pre-processor to be suitable for building a real attribute used in describing the well, based on the artificial attribute received from the attribute pre-processing module and the visible attribute received from the first database via the data access layer in response to the request.

9 The second set of claims, Set B, similarly comprises four independent claims which read:

*1. An apparatus for determining the true vertical depth along a well, comprising:*

*a) a data access layer having a second database, the data access layer mapping visible attributes to database attributes in the first database, the second database having an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data using a usage rule and a building block; and*

*b) an attribute pre-processing module for scanning a user request to see if the request includes the artificial attribute, receiving the artificial attribute from the second database, sending a request for a visible attribute to the data access layer, and which creates an artificial attribute post processor suitable for building a real attribute used in describing the well from a combination of the artificial attribute received from the attribute pre-processing module and a visible attribute received from the first database via the data access layer in response to the request,*

*wherein the post processor is adapted to use the real attribute to determine a true vertical depth (TVD) along the well.*

*13. A method of determining a true vertical depth along a well, comprising:*

*a) receiving a request for stored data;*

*b) scanning the request to see if the request seeks an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;*

*c) receiving the artificial attribute from a second database;*

*d) retrieving data required to build the artificial attribute into a real attribute used in describing the well;*

*e) using the retrieved data to build the real attribute; and*

*f) using the real attribute to determine a true vertical depth (TVD) along the well.*

*26. A method for determining a true vertical depth along a well, comprising:*

*a) an attribute pre-processor receiving a request for stored data;*

*b) the attribute pre-processor scanning the request to see if the request seeks an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;*

*c) if the request seeks an artificial attribute, the attribute pre-processor receiving the artificial attribute from the second database, creating an artificial attribute post-processor, sending the artificial attribute to the artificial attribute post-processor, and sends a request for visible attributes to a data access layer;*

*d) the data access layer sending a query to the first database for a database attribute, retrieves the database attributes, retrieves the visible attributes mapped to the database attribute, and send the visible attribute to the artificial attribute post-processor; and*

*e) the artificial attribute post-processor creating a real attribute used in describing the well from the visible attribute and the artificial attribute received from the data access layer in response to the request, and sending the real attribute to an output; and*

*f) the artificial attribute post-processor determining, using the real attribute, a true vertical depth (TVD) along the well.*

27. A system for determining a true vertical depth along a well, comprising:

*a) a data access layer having a second database, the data access layer mapping visible attributes to database attributes in the first database, the second database having an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;*

*b) an attribute pre-processing module for scanning a user request to see if the request includes the artificial attribute, receiving the artificial attribute from the second database and sending a request for a visual attribute to the data access layer;*

*c) an artificial attribute post processor created by the attribute pre-processor to be suitable for building a real attribute used in describing the well, based on the artificial attribute received from the attribute pre-processing module and the visible attribute received from the first database via the data access layer in response to the request,*

*wherein the system is adapted to determine, using the real attribute, the true vertical depth (TVD) along the well.*

### **Added Matter**

- 10 As noted above, full consideration of the issue of added matter and whether any such matter had been successfully excised from the claims dated 20 May 2008 was deferred at the time of the hearing and it would appear appropriate to consider this point before moving on to whether the invention is excluded under section 1(2).

### **The Law**

- 11 Section 76 of the Act concerns amendment of applications not to include added matter, the relevant part of the section reads:

76(2) No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.

## Interpretation

- 12 The question of whether an amendment of a patent results in the disclosure of additional subject matter was considered in *Bonze*<sup>3</sup> by Aldous J, who set out his approach as follows:

*“The decision as to whether there was extension of disclosure must be made on a comparison of the two documents read through the eyes of a skilled addressee. The task of the court is threefold:*

*(1) To ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application.*

*(2) To do the same in respect of the patent as granted.*

*(3) To compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly.”*

- 13 Matter may be regarded as having been disclosed if the skilled addressee would realize that it was implicit in the original document<sup>4</sup>. However, matter which is not disclosed but which the skilled addressee would find obvious to add is not regarded as having been implicitly disclosed<sup>5</sup>.

## The Arguments

- 14 In assessing who the skilled addressee would be, I consider that the invention could be undertaken by a person or persons skilled in computer modeling and the use of databases and their manipulation to that end.
- 15 The disclosure of the invention, as was acknowledged at the hearing by Dr. Suckling, is complex but I do not believe that the skilled addressee, given reasonable time, would have difficulty identifying the essential components of the invention when considering the application as a whole as the application is consistent in this regard. I would note, however, that while the language used within the application is evocative of a system comprising a number of elements of hardware, it is clear from the application as a whole that the invention is one implemented purely by software (for example, figure 1 and paragraph 00017) and I believe that this would be appreciated by the skilled addressee.
- 16 The operation of the system, however, is less readily apparent from the application, but I believe that the core operation proceeds in the following way:

- A data request, that is the input, is received which is scanned by the attribute pre-processing module to determine if an artificial attribute is requested. If no such attribute is requested, then that is the end of the process.

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<sup>3</sup> *Bonze and Schneider (Europe) AG v Intervention Ltd* [1991] RPC 553

<sup>4</sup> *DSM NV's Patent* [2001] RPC 35

<sup>5</sup> *Direction Indicators Ltd's Application* [1994] RPC 207

- If an artificial attribute is requested then the artificial attribute, along with additional appropriate meta-data for said artificial attribute, is received by the attribute pre-processing module from the second database, after which the pre-processing module creates a suitable artificial attribute post-processor based on the artificial attribute meta-data. The pre-processing module then feeds the artificial attribute and associated meta-data to the post-processor.
- The pre-processing module additionally sends a database request to the database-specific data access layer to retrieve from the first database the visible attributes required for creating a real attribute corresponding to the artificial attribute, based on the artificial attribute's meta-data (the usage rule and building blocks). The appropriate visible attributes are retrieved by the database-specific data access layer and sent directly to the post-processor.
- The post-processor then creates a real attribute that corresponds to the artificial attribute that the user wishes to retrieve and incorporates the real attribute into the result set which is then sent to the output, which might be a display and/or printer or an input into another software module, such as a data transfer module.

- 17 The created post processor and its operation is entirely in software.
- 18 Considering the independent claims of the Set A, I am content that they do not contain any subject matter which extends beyond that disclosed in the original application as filed, but merely describe the apparatus, methods and system in more detail compared with the equivalent originally-filed claims. I am also content that the passages stating that the various attributes are used to describe wells in oil and gas software applications are allowable as there are a number of references to such use throughout the application as filed.
- 19 The independent claims of the Set B claims are directed towards an apparatus, methods and a system for determining the true vertical depth (TVD) along a well. Reference to such a determination is made only once within the application as filed, in the following passage from original paragraph 00029:
- “Note that artificial attributes 30 are not only limited to shapes. The artificial attributes 30 can also be used for other types of data, such as formulas. For example: A true vertical depth (TVD) artificial attribute post-processor 52 can be used to compute the true vertical depth along a wellbore, given the building blocks 13 of a wellbore deviation survey (an array with x, y coordinates) and a measured depth (z) along the wellbore deviation survey.”*
- 20 Given the above disclosure, I am happy that the claims can be directed towards the determination of the true vertical depth as this is explicitly mentioned as a data type which can be determined by the system.

21 The independent claims have additionally been amended to include a final step over the equivalent claims in Set A, the additional steps being:

Claim 1 – ‘...wherein the post processor is adapted to use the real attribute to determine a true vertical depth (TVD) along the well’

Claim 13 – ‘f) using the real attribute to determine a true vertical depth (TVD) along the well.’

Claim 26 – ‘f) the artificial attribute post-processor determining, using the real attribute, a true vertical depth (TVD) along the well.’

Claim 27 – ‘wherein the system is adapted to determine, using the real attribute, the true vertical depth (TVD) along the well.’

22 Claims 1 and 26 state that the artificial attribute post-processor determines the true vertical depth using the real attribute, but this equates to the artificial attribute post-processor using its own output, the real attribute, to then perform a calculation, which is not an arrangement that is disclosed, implicitly or explicitly, within the original application.

23 With regard to claims 13 and 27, while it is disclosed that the output of the artificial attribute post-processor may **be** the true vertical depth, there is no disclosure that the real attribute, once itself determined, can then in turn be used to determine the true vertical depth. Further, I do not believe that the skilled addressee would find such a step to be implicit in the teachings of the original application given such fleeting and specific reference to the determination of true vertical depth within the application as a whole. Given the decision in *Direction Indicators*, it is of no help that the skilled addressee might find it obvious that the true vertical depth could be determined from a suitable real attribute.

24 I therefore conclude that these passages disclose matter extending beyond that disclosed in the application as filed, contrary to the requirements of section 76(2). The only remedy available to this issue would be to remove from the claims those passages which act to add matter, which would leave the claims reading as follows (with deletions to aid comprehension):

*1. An apparatus for determining the true vertical depth along a well, comprising:*

*a) a data access layer having a second database, the data access layer mapping visible attributes to database attributes in the first database, the second database having an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data using a usage rule and a building block; and*

*b) an attribute pre-processing module for scanning a user request to see if the request includes the artificial attribute, receiving the artificial attribute from the second database, sending a request for a visible attribute to the data access layer, and which creates an artificial attribute post processor suitable for building a real attribute used in describing the well from a combination of the artificial attribute received from the attribute pre-processing module and a visible attribute received from the first database*



via the data access layer in response to the request, wherein the post processor is adapted to ~~use the real attribute to~~ determine a true vertical depth (TVD) along the well.

13. A method of determining a true vertical depth along a well, comprising:

- a) receiving a request for stored data;
- b) scanning the request to see if the request seeks an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;
- c) receiving the artificial attribute from a second database;
- d) retrieving data required to build the artificial attribute into a real attribute used in describing the well;
- e) using the retrieved data to build the real attribute. ~~and~~
- ~~f) using the real attribute to determine the true vertical depth (TVD) along the well.~~

26. A method for determining a true vertical depth along a well, comprising:

- a) an attribute pre-processor receiving a request for stored data;
- b) the attribute pre-processor scanning the request to see if the request seeks an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;
- c) if the request seeks an artificial attribute, the attribute pre-processor receiving the artificial attribute from the second database, creating an artificial attribute post-processor, sending the artificial attribute to the artificial attribute post-processor, and sends a request for visible attributes to a data access layer;
- d) the data access layer sending a query to the first database for a database attribute, retrieves the database attributes, retrieves the visible attributes mapped to the database attribute, and send the visible attribute to the artificial attribute post-processor; and
- e) the artificial attribute post-processor creating a real attribute used in describing the well from the visible attribute and the artificial attribute received from the data access layer in response to the request, and sending the real attribute to an output; and
- f) the artificial attribute post-processor determining ~~using the real attribute,~~ a true vertical depth (TVD) along the well.

27. A system for determining a true vertical depth along a well, comprising:

- a) a data access layer having a second database, the data access layer mapping visible attributes to database attributes in the first database, the second database having an artificial attribute used in describing a well in an oil and gas software application and defined in meta-data on a second database using a usage rule and a building block;
- b) an attribute pre-processing module for scanning a user request to see if the request includes the artificial attribute, receiving the artificial attribute from the second database and sending a request for a visual attribute to the data access layer;

*c) an artificial attribute post processor created by the attribute pre-processor to be suitable for building a real attribute used in describing the well, based on the artificial attribute received from the attribute pre-processing module and the visible attribute received from the first database via the data access layer in response to the request, wherein the system is adapted to determine ~~, using the real attribute,~~ the true vertical depth (TVD) along the well.*

## Patentability

### The Law

- 25 The examiner has argued that the claimed invention relates to subject matter excluded from patentability under section 1 of the Act, in particular to a computer program under section 1(2)(c). The relevant parts of the section read:

1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –  
(a) the invention is new;  
(b) it involves an inventive step;  
(c) .....  
(d) the grant of a patent for it is not excluded by subsections (2) and (3) below;

and references in this Act to a patentable invention shall be construed accordingly.

1(2) 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) .....  
(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 the act only to the extent that a patent or application for a patent relates to that thing as such.

- 26 As near as practicable, these provisions have the same effect as Article 52 of the European Patent Convention (EPC) to which they correspond by virtue of being so designated in Section 130(7).

### Interpretation

- 27 As stated above, the test for assessing patentability as set out by the Court of Appeal in *Aerotel/Macrossan* comprises the following four steps:

- 1) properly construe the claim;
- 2) identify the actual contribution;
- 3) ask whether it falls solely within the excluded subject matter;
- 4) check whether the actual or alleged contribution is actually technical in nature.

## The Arguments

### Claims Set A

- 28 In applying the first step I do not think that there is any difficulty in construing the claims. Indeed, this step has never been an issue during the prosecution of the application and Dr. Suckling was similarly content with this point at the hearing.
- 29 The second step requires me to identify the actual contribution and in this regard I believe that it is helpful to consider the guidance provided by the Court of Appeal, who state in paragraphs 43 and 44 of *Aerotel/Macrossan*: *“What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at the substance not the form - which is surely what the legislator intended.”* and *“In the end the test must be what contribution has actually been made, not what the inventor says he has made.”*
- 30 Dr. Suckling argued that the contribution is a method of accessing stored data to build a real attribute for use in describing an oil or gas well according to the steps of claim 13, providing a solution to the problem identified in paragraph 0003 of the original description of accessing data stored in a proprietary format. He considered that claim 1 made a similar contribution but with a corresponding apparatus. In contrast, the examiner is of the view that the contribution relates to a more effective and efficient way of accessing data in order to build a real attribute from an artificial attribute.
- 31 In the letter of 20 May 2008, and at hearing, Dr. Suckling placed a large degree of emphasis on the problem set out in paragraph 3 of the application, that is the issue of accessing data stored in a proprietary manner, and how the application provides a solution to this problem. However, it was unclear to me exactly which part of the invention overcomes the “proprietary manner” problem. The application states that the problem is that *“One would have to write database-specific code for each database schema and data type in order to access the special data. This is time consuming and inconvenient.”* and *“other (non-spatial) data is also sometimes stored in a proprietary manner and is subject to the same problems.”* However, there is nothing in the claims about how the invention overcomes any proprietary format since all the data used in the invention appears simply to be available and fully accessible in the two databases and, at hearing, Dr. Suckling could offer no further guidance.
- 32 Paragraphs 00016-00019 of the original disclosure appear to suggest that the meta-data dynamically dictates where the data should come from and that the data access layer is actually data-specific (paragraph 00019) and may be proprietary. That being so, there would appear to be little distinction in having to provide a data-specific access layer for a proprietary format and the alleged problem of writing database-specific code for each database schema and data type in order to access the proprietary data. Indeed, it appears to me that a corresponding amount of work would most probably be required in preparing appropriate meta-data to facilitate the extraction of the desired data from the range of proprietary data as would otherwise be required to write the database specific code. Further, and critically, paragraph 00019 also goes on to say that such data-specific access layers and associated first databases are commercially

available, and that the data access layer also includes the second database, so they can form no part of the contribution.

- 33 There is no suggestion within the claims under consideration, or indeed in the application as a whole, that the apparatus upon which the methods are performed is anything other than conventional.
- 34 Consequently, following *Aerotel/Macrossan* and having regard to the problem to be solved, how the invention works, what its advantages are, and the substance of the invention, and bearing in mind all the entirely conventional or known material considered above, I assess that the actual contribution is that, following a user request concerning a particular type of data, software accesses stored data from databases according to predefined rules and manipulates it to formulate a different particular type of data. All of that is done in and by software.
- 35 The third step of the test is to ask whether the identified contribution lies solely within an excluded category. Dr. Suckling considered that the claims define a technical solution to a technical problem and so are patentable under the principles set out in *Symbian*<sup>6</sup>. He directed me towards paragraph 58 of that judgment, arguing that the method's elimination of the need for database specific code was comparable with there being a novel technical effect on the computer and its operation, in that time consuming steps were removed and overall processes shortened. I do not believe that *Symbian* makes such a broad assertion; the paragraph in question reveals that "*.. a program which has some novel technical effect **on an important component in the computer's operating system** [my emphasis] should not qualify as doing more than merely operating as a computer program notwithstanding its effect to solve what on one view is a software problem affecting the functioning and reliability of the computer.*" In the current application there is no such equivalent technical effect as there is no problem affecting the functionality and reliability of **the computer**. Further, the solution to the problem is not novel as the data access layer and associated databases are acknowledged as being commercially available.
- 36 Further, I can find no disclosure within the application that, for example, there is an increase in processing speed or some other technical effect on a component of the computer or even that the method of extracting data is more accurate or more efficient than any other comparable method. The only potential savings made through operation of the invention might be those relating to the time and effort which would be required in writing database specific code.
- 37 Further, I do not believe that a reduction in the time required to program a computer can be considered comparable to a novel technical effect such as is discussed in *Symbian*. At best the method of the invention can be considered to equate to bringing a level of automation or simplification to a process which would otherwise be done somewhat more laboriously but, as was noted in *Fisher-Rosemount*<sup>7</sup>, the provision of a system which provides functionality that could otherwise be provided by a skilled programmer rewriting code cannot, in itself, be considered to provide a contribution outside of the excluded categories.

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<sup>6</sup> *Symbian Ltd* [2008] EWCH 518 (Pat)

<sup>7</sup> *Fisher-Rosemount Systems' Application* (BL O/026/07)

- 38 I can find nothing within the application that suggests that the working of the invention is performed by anything other than computer instructions adapted for the purpose of accessing data from a database, manipulating it and formulating a result. I must therefore conclude that the contribution which is made by the invention as defined in the Set A claims is one solely within the meaning of a computer program as set out in section 1(2)(c).
- 39 Further, in considering substance over form, none of the apparatus or system elements of the invention are new or used in a new way and do not change the contribution. The independent apparatus claim and the independent system claim must therefore also fail.
- 40 Having come to this conclusion, and having already considered the technical effect of the invention, it is unnecessary to continue to step four of the test to consider whether the contribution is actually technical in nature. However, in light of *Symbian* and for the avoidance of doubt, were I to do so, I am not of the opinion that there is a technical effect in the contribution to pass the test. The invention doesn't solve a technical problem within the computer, it merely provides software by which particular data can be accessed and manipulated to compute a result. The contribution is not a technical solution, but an exercise in information selection and manipulation.

### **Claims Set B**

- 41 The removal of the added subject matter as discussed above leaves claim 13 terminally flawed; having begun as a claim directed towards a method of determining a true vertical depth along a well, no such determination is ever made. Consequently, it is only necessary to consider the three remaining independent claims; however, it should be noted that, although of equal relevance to these claims, much of Dr. Suckling's comments at hearing were based on claim 13.
- 42 Working through the steps of the *Aerotel/Macrossan* test once more, again I do not believe that the initial step of properly construing the claims provides any particular problems beyond those already discussed.
- 43 For the second step of the test, Dr. Suckling argued that the actual contribution made by the invention is a method of determining the true vertical depth along a well, having the steps in the claim (13). I am broadly in agreement with this view but in my opinion the actual contribution is better and more simply formulated as a method of accessing stored data from a database so as to determine the true vertical depth along a well.
- 44 With regard to step 3 of the test, Dr Suckling referred me to *Halliburton*<sup>8</sup> and argued that the Set B claims were 'tethered' to an industrial activity, that is the determination of true vertical depth along an oil or gas well, and that it should be appreciated that the invention was inherently concerned with such a physical system and that the contribution therefore related to more than just excluded matter. In response to the examiner's comments of 14 January 2008, made with

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<sup>8</sup> *Halliburton v Smith International* [2006] EWCA Civ 185, [2006] RPC 653

reference to *Elf*<sup>9</sup>, that the application of real world data to a method does not necessarily make it patentable, Dr. Suckling argued that the current application was not directly comparable with *Elf* as, while he considered the claims of *Elf* to be somewhat 'woolly' and pertained only to a model, the invention as defined by the Set B claims had a clear physical connection to a physical system.

- 45 However, I believe that a distinction must be drawn between methods that are integral to an industrial activity, such as a method which acts to control a crane or a production line in a new way, and methods which merely operate using data which relates to an area of industrial activity but which do not actually form any part of or contribute to an activity *per se*. I believe that the substance of the invention is of the latter type; the fact that the data being processed relates to the true vertical depth of a well has no bearing on the actual workings of the well itself. From this perspective, I do not believe that the invention defined in the Set B claims can be considered 'tethered' in the sense of *Halliburton*. Indeed, it was accepted at hearing that an earlier attempt to provide such a tether, since none previously existed, resulted in the objection, now conceded, to added matter. The invention itself is not a physical system; there is no physical connection to any other physical system since the result is simply a number, albeit one which represents a real world depth, to be displayed, printed or passed to another piece of software. There is no disclosure of any technical use to which the depth is put, either directly or indirectly, and it was accepted that the earlier attempt to claim the use of the depth value as a controlling feature in operation of the well resulted in added matter. Consequently, the result of the invention is purely the creation of a numerical value.
- 46 In the letter of 20 May 2008, a parallel was drawn with an EPO decision in *Vicom*<sup>10</sup> in which "a claim directed to a technical process, which process is carried out under the control of a program (whether by means of hardware or software), cannot be regarded as relating to a computer program as such." I do not regard the accessing and manipulation of stored data according to pre-defined rules as a qualifying technical process.
- 47 As with the Set A claims, the claims of Set B remain, *in substance*, directed towards the manipulation of data to give an end result, with the only difference being that the type of data is more specifically defined. There is no suggestion that the invention helps calculate the true vertical depth more accurately or more quickly than any other method which might be used, nor is the TVD so derived used in any directly technical sense. As has previously been discussed, there are no improvements to the computer system or its operation.
- 48 I can find nothing within the application that suggests that the working of the invention as defined by the Set B claims is performed by anything other than computer instructions adapted for the specific purpose of accessing stored data from a database and manipulating them in order to calculate a particular value, that value being the true vertical depth along a well, with everything being done in and by software. I must therefore conclude that the contribution made by the invention as defined in the Set B claims is one solely within the meaning of a

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<sup>9</sup> *Institut du Francais Petrol & Elf's Application* [BLO O/135/07]

<sup>10</sup> T0208/84, *Vicom*.

computer program as set out in section 1(2)(c).

- 49 Having come to this conclusion, and having already considered the technical effect of the invention of claims Set B, it is unnecessary to continue to step four of the test to consider whether the contribution is actually technical in nature. However, in light of *Symbian* and for the avoidance of doubt, were I to do so, I am not of the opinion that there is a technical effect in the contribution to pass the test. The invention doesn't solve a technical problem within the computer, it merely provides software by which particular data can be accessed and manipulated to compute a particular numerical result. As with the claims of Set A, the contribution is not a technical solution, but an exercise in information selection and manipulation.

### **Conclusion**

- 50 I have found that the invention of proposed claim Set A relates to a program for a computer and is excluded from patentability under Section 1(2). I have found that proposed claim Set B contains added matter contrary to Section 76(2) and that, with that matter excised, the invention relates to a program for a computer and is excluded from patentability under Section 1(2). I have read the specification in its entirety and cannot identify anything that could form the basis of a patentable invention. I therefore refuse the application under section 18(3) as failing to meet the patentability requirements of section 1.

### **Appeal**

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

**John Rowlatt**

Deputy Director acting for the Comptroller