

PATENTS ACT 1977

APPLICANT Schlumberger Holdings Limited

ISSUE Whether patent application number GB
0608392.7 complies with section 1

HEARING OFFICER Mrs S E Chalmers

DECISION

Introduction

- 1 This decision primarily concerns the issue of whether the invention claimed in UK patent application number GB 0608392.7 relates to non-excluded subject matter as required by section 1 of the Act.
- 2 The application derives from an application filed under the PCT by Schlumberger Holdings Limited on 1 October 2004 and which was published as WO 2005/033980. The application is entitled "A system, a method and an apparatus for importing text data into a database" and was re-published in the UK as GB 2423391.
- 3 During the examination process, the examiner reported that the invention defined in the claims is excluded as a computer program. Despite a number of rounds of amendment and re-examination, the Applicants and the examiner were not able to resolve this issue and a hearing was arranged to help me decide the matter. That hearing took place on 16 April 2008. The Applicants were represented by Dr Andrew Suckling of the Patent Attorneys Marks & Clerk. The examiner, Mr Jake Collins, also attended.

The Application

- 4 The application concerns a method of loading data representing record(s) of measurements from an oil well from a spreadsheet into a database. This is done by using a control file to parse the spreadsheet data according to certain rules before sending the parsed data to the database. As the specification explains, it is common in the oil and gas industry to use a loading program to read and decode a dataset eg in binary or text format, and to load the decoded data into tables stored in a database. In the case of industry standard formats, "custom" loaders are written to read a dataset in a specific format and load the decoded data into a specific database. However, in the case of datasets in non-standard

files which may contain data records in any format, it is said to be almost impossible to create custom loaders for all such text data layouts. The invention is said to overcome this problem by providing a control file which, by applying certain rules to each record, enables such data to be loaded into the desired database.

- 5 The claims I was asked to consider at the hearing were filed on 14 April 2008 along with a skeleton argument. There are 76 claims in total comprising 3 independent claims (claims 1, 28 and 53) which relate respectively to an apparatus, method and system of processing data. Claim 28 most clearly sets out the invention and reads:

A method of processing data representing a well in the exploration and production domain, the method comprising:

- a) obtaining a spreadsheet dataset having data representing the well in the form of one or more records by measuring the data from the well;*
- b) creating a control file having rules, each rule including a condition;*
- c) inputting the spreadsheet dataset and the control file into a spreadsheet loader;*
- d) evaluating each rule with respect to each record to determine if the condition for the rule is true for that record and if the condition is true, then parsing the record into one or more tokens and referencing the value of the parsed record using a value clause of the rule; and*
- e) sending the parsed, valued data to a database.*

- 6 Dr Suckling explained that the claims as amended were addressed to meeting the objection to added subject matter raised by the examiner to the previous claims on file. I agreed the objectionable matter had been removed. However, I questioned the clarity of the phrase “measuring the data” in step a) which had been introduced into the latest set of claims as it seemed to me that it did not follow on clearly from the wording “obtaining a spreadsheet database” specified in this step. (I observe that claims 1 and 53 also have this new wording.) With hindsight, I realize that I did not express myself sufficiently clearly on this point at the hearing and I apologise to Dr Suckling for the subsequent confusion. Reading the claims to make sense of them, as I must, I do not think anything hangs on this and I am content that the claims as amended overcome the section 76 objection and are clear.

The Law

- 7 Section 1 of the Patents Act 1977 sets out the requirements that an invention must fulfil for it to be patentable including, in section 1(2), a list of things for which patent protection is not available. The relevant part of this section reads:

“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 purpose of this Act only to the extent that a patent or application for a patent relates to that thing as such."

Interpretation

8 The law in relation to the exclusions has been the subject of much scrutiny by the Courts in recent times culminating in the Court of Appeal's consideration of the issue in *Aerotel/Macrossan*¹. In its judgment in that case, the Court approved a new approach to assessing patentability which comprises a four-step test as follows:

1) properly construe the claim

2) identify the actual contribution

3) ask whether the actual contribution falls solely within the excluded subject matter

d) check whether the contribution is actually technical in nature.

Applying the test

Construe the claims

9 The first step of the *Aerotel* test requires me to construe the claim. Dr Suckling reminded me that section 42 of *Aerotel/Macrossan* involved a consideration of the claimed monopoly and wanted to make it clear that in construing the claims I had to include the features of the whole claim. I agree.

10 The claims are not difficult to construe. In the case of claim 28, the claim is clearly a method of processing data measurements from a well and loading them into a database. This involves making data measurements of the well and obtaining a spreadsheet dataset of this data in the form of records. Each record in the dataset is then tested against a set of rules in a control file and, if the rules are passed, the data is parsed and sent to the database.

Identify the actual contribution

11 The second step is to identify the contribution. This was the subject of discussion at the hearing and the source of the difference of opinion that exists between Dr Suckling and the examiner.

¹ *Aerotel Ltd vs Telco Holdings Ltd & Macrossan's Patent Application* [2007] RPC 8

- 12 Dr Suckling explained that the present invention related to data processing in the oil and gas industry and in particular addressed the problem of loading data that are in non-standard files by providing an interface that allowed loading of all spreadsheet text data into a database. As a result, you could get better information about the Earth's interior because you could use all the data you had, regardless of what format it was in, to help you locate oil or gas. In his view, the contribution was

“A method of acquiring data that represents an oil or gas well and loading that data into a database with minimal manual effort, regardless of the format of the data, so as to make that data available for further processing in the oil or gas industry.”

- 13 In advancing arguments in support his assessment, Dr Suckling argued that the contribution should be looked at as a whole: it was not permissible to exclude the feature of obtaining the spreadsheet database as defined in step (a) from the contribution as was the approach taken in the examiner's assessment. He was rightly concerned that if you took the wrong approach in carrying out this step you could end up with a contribution that struck out elements of the claim that were considered known and be left (wrongly) with a computer program. He stressed that the contribution resided in obtaining the data by carrying out measurements on the well and then loading it into the database after applying the set of rules and hence went beyond a computer program. In support of this broad view, Dr Suckling referred me to paragraph 28 of the *Waters Investments*² decision where the Comptroller's Hearing Office said that

“whilst those chromatographic and spectrometric analysis steps are not of themselves new, when viewed as a whole, what the inventors have contributed is a better way of analyzing samples using those techniques That contribution in my view does not reside solely in excluded matter”.

He also referred me to paragraphs 19 and 20 of the *WesternGeco*³ decision where the Comptroller's Hearing Officer took a similar broad view of the contribution.

- 14 In paragraph 43 of the *Aerotel/Macrossan* judgment, the Court restated its previous findings that in identifying the actual contribution it is substance that matters rather than the form of claim. The judgment says *“It is an exercise in judgment probably involving the problem said to solved, how the invention works, what the advantages are. What has the inventor really added to human knowledge perhaps best sums up this exercise.”.*
- 15 So what *in substance* has really been added to human knowledge? I recognize that Dr Suckling sees the contribution in terms of both the data measurement and data processing operations. However, I think this assessment gives greater weight to the data measurement step than is justified. In my view, the contribution (in terms of what has been added to human knowledge) lies in a new way of processing data measurements representing a well. I therefore assess

² BL O/146/07

³ BL O/135/07

the contribution as

“A method of loading a data set of measurements representing a well from a spreadsheet into a database, wherein each data record is tested against a set of rules, and if the rules are passed, the record is parsed and loaded into the database.”

Is the contribution excluded?

- 16 Dr Suckling argued that the contribution solved a technical problem through providing a method of processing data which improved flexibility by extending the range of usable data formats and thus enhanced the amount of useful information available to the oil and gas industry. Hence the contribution went beyond a computer program as such. In support of his argument that the claimed method of processing data from a well was patentable, he referred me to the recent *Symbian*⁴ decision at paragraph 63 where Patten J says:

“In the present case there is **a perceived shortcoming** [emphasis added] caused by modification to the DLL as a result of updates to the computer’s functionality. This is not a case where the invention is limited to the processing of data. If an increase in speed at which the computer works can take the program out of Art 52(3) (see *Aerotel* at paragraph 92), it is difficult to see why the improved reliability of the machine brought about by the re-organisation of the DLL in its operating system does not”.

In his view, the ability in the oil and gas industry to load spreadsheet text data in many non-standard formats into a database fixed a perceived shortcoming. Thus there was clearly a technical effect that was over and above the technical effect to be expected from the mere loading of a program into a computer.

- 17 Dr Suckling also referred me to paragraph 216 of *Halliburton*⁵ which says:

“An untethered method claim may well cover activities which have nothing to do with any industrial activity but, if the claim is tied down to the industrial activity it becomes a valuable invention restricted to its proper sphere.”

He argued that the reference in the claims to a processing operation performed on real world data ie measurements from an oil well, clearly tied the claim to the industrial domain of well exploration and production and hence took the contribution beyond a mere computer program as such.

- 18 It seems to me that if the contribution made by the invention, considered as a matter of substance rather than the form of claim (see paragraph 43 of *Aerotel/Macrossan*), consists solely of a program for a computer, then the invention will be excluded under section 1(2) and will not be saved by reference to a possible technical effect. I should not now give the applicant benefit of any doubt as to whether the invention arguably covers patentable subject-matter, as paragraph 5 of the judgment makes clear. Nevertheless, it bears emphasising that the exclusion of section 1(2) applies only where the invention relates to excluded matter as such. I am conscious of the warning given in paragraph 22 of *Aerotel/Macrossan* that just because an invention involves the use of a computer

⁴ *Symbian Ltd* [2008] EWHC 518 (Pat)

⁵ *Halliburton v Smith International* [2006] RPC 2

program does not necessarily mean it is excluded from patentability. I must therefore be satisfied that the contribution lies solely in a computer program before finding against the applicant.

- 19 So, does the contribution fall solely within the excluded subject matter? In my view it does. I accept that the records in the dataset on which the control file operates are the result of real world geophysical measurements. However, I am not persuaded by Dr Suckling's arguments that the contribution is tethered to the real world in the sense of *Halliburton* because the end result of the claimed data processing operation is still a set of records in a database sitting within a computer. What the applicant has contributed is a computer program that processes data in one format so that it can be stored in another. Indeed, at the hearing, Dr Suckling acknowledged that there was no further analysis of the data. That is a paradigm example of a program for a computer and is excluded. There is no technical effect. I therefore find the contribution sits squarely within the computer program exclusion.

Check whether the contribution is technical in nature

- 20 Paragraphs 46-47 of *Aerotel/Macrossan* explain that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point, and that a contribution that consists solely of excluded matter will not count as a technical contribution. Whether the fourth step needs to be undertaken if the invention fails the third step has been considered in a number of court judgments since *Aerotel/Macrossan*.
- 21 I find it difficult to reconcile the *Symbian* judgment (which says you must answer the technical contribution question) with the Court of Appeal judgment in *Aerotel/Macrossan* and numerous other judgments of the High Court. However, I do not think that I need to attempt this in the present case. I have found above that the contribution is a computer program that processes data in one format so that it can be stored in another and that there is no technical effect. Irrespective of whether, having found the invention to have failed the third *Aerotel/Macrossan* step, I need as a matter of law to go on to the fourth step, I do not think the contribution is technical in nature.

Decision

- 22 I have found that the contribution made by the invention defined by claims 1, 28 and 53 falls solely in excluded subject matter and that the invention defined therein is excluded as a program for a computer *as such*. I have read the specification carefully and I can see nothing in any of the dependant claims or anywhere else in the specification that could be reasonably expected to form the basis of a valid claim. I therefore refuse the application under section 18(3).

Appeal

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

MRS S E CHALMERS

Deputy Director acting for the Comptroller