



PATENTS ACT 1977

APPLICANT Palantir Technologies Inc.
ISSUE Whether patent application number GB1404479.6
complies with section 1(2)
HEARING OFFICER Peter Slater

DECISION

- 1 Patent application GB1404479.6 entitled “Transformation of data items from data sources using a transformation script” was filed on 13th March 2014, claiming an earliest priority date of 15th March 2013. It was published as GB 2513007 on 15th October 2014.
- 2 Following two rounds of examination and argument, the examiner remained of the view that the claimed invention was excluded from patentability under section 1(2). With the situation unresolved the applicant asked to be heard and the matter came before me at a hearing on the 25th April 2016. The applicant was represented by Paul Derry of Venner Shipley LLP. Also present were hearing assistant Emma Porter and observer Gareth James.
- 3 The examiner had not searched the application using the discretion provided under Section 17(5)(b) and so there are matters outstanding which will need to be resolved if the invention is found to not be excluded.

The invention

- 4 Data contained in structured data stores are often poorly suited for data analysis. One method of more efficient data analysis requires the reorganisation of the stored data according to an object model that defines object structures and the relationships between the object structures. This reorganisation is carried out by running transformation scripts on a computer processor.
- 5 When the data sources are large, or very large, the transformation process is a highly computationally expensive operation. The amount of computation is increased considerable when the transformation scripts initially include errors and these errors are not detected until the transformation process has been run and completed. If errors are present in the transformation script, the entire data transformation process then needs to be repeated with a corrected script.

- 6 The invention relates to reducing the computation time needed to transform data sources into an object model using a transformation script which initially includes errors. This is done by providing validation notices as the errors arise when the transformation script is run, a process which is called “proactive debugging” in the application. By providing timely validation notifications, before the processing of all of the data, a user or developer can then fix the error in the transformation script before running the transformation script again.
- 7 No amended claims were filed during the processing of the application. There are 15 claims of which claims 1 and 6 are independent and which read as follows:

Claim 1:

An apparatus for providing a proactive validation of a transformation script, the apparatus comprising:

a memory device that stores a set of instructions;

one or more processors that execute the set of instructions to configure the one or more processors to:

associate the transformation script with ontology parameters;

initiate a debugging operation of the transformation script having at least one condition;

import from a data source, at least one data item for transformation;

determine, as part of the debugging operation, whether the at least one condition that uses the at least one data item is valid based on the ontology parameters; and

provide an indication of a result associated with the determination.

Claim 6:

A method of providing a proactive validation of a transformation script, the method being performed by one or more processors and comprising:

associating a transformation script with ontology parameters;

initiating a debugging operation of the transformation script having at least one condition;

importing, from a data source, at least one data item for transformation;

determining, as part of the debugging operation, whether the at least one condition that uses the at least one data item is valid based on the ontology parameters; and

providing an indication of a result associated with the determination.

The Law

- 8 The examiner has raised an objection under section 1(2)(c) of the Patents Act 1977 that the invention is not patentable because it relates to a program for a computer as such; the relevant provisions of this section of the Act are shown in bold below:

1(2) It is hereby declared that the following (amongst other things) are not inventions for the purpose of the 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 provisions 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.

- 9 As explained in the notice published by the UK Intellectual Property Office on 8 December 2008¹, the starting point for determining whether an invention falls within the exclusions of section 1(2) is the judgment of the Court of Appeal in *Aerotel/Macrossan*².
- 10 The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian Ltd's Application*³. *Symbian* arose under the computer program exclusion, but as with its previous decision in *Aerotel*, the Court gave general guidance on section 1(2). Although the Court approached the question of excluded matter primarily on the basis of whether there was a technical contribution, it nevertheless (at paragraph 59) considered its conclusion in the light of the *Aerotel* approach. The Court was quite clear (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel* was never intended to be a new departure in domestic law; that it remained bound by its previous decisions, particularly *Merrill Lynch*⁴ which rested on whether the contribution was technical; and that any differences in the two approaches should affect neither the applicable principles nor the outcome in any particular case. But the *Symbian* judgment does make it clear, that in deciding whether an invention is excluded, one must ask does it make a technical contribution? If it does then it is not excluded.
- 11 Subject to the clarification provided by *Symbian*, it is therefore still appropriate for me to proceed on the basis of the four-step approach explained at paragraphs 40-48 of *Aerotel/Macrossan* namely:

- 1) Properly construe the claim;

¹ <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-pn/p-pn-computer.htm>

² *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007] RPC 7

³ *Symbian Ltd v Comptroller-General of Patents*, [2009] RPC 1

⁴ *Merrill Lynch's Application* [1989] RPC 561

2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution);

3) Ask whether it falls solely within the excluded matter, which (see paragraph 45) is merely an expression of the “as such” qualification of section 1(2);

4) If the third step has not covered it, check whether the actual or alleged contribution is actually technical.

12 The operation of this test is explained at paragraphs 40-48 of the judgment. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form. Paragraph 46 explains that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point.

13 Mr Derry agreed that this was the correct approach to take.

Arguments and Analysis

14 The examiner maintains that the invention as claimed is excluded under section 1(2)(c) of the Act as it relates to a program for a computer as such. Their position is set-out in the examination reports dated 12th August 2014 and 9th July 2015. The applicant’s arguments to the contrary are contained in their letter of 16th March 2015. I am also grateful to Mr Derry for having supplied me with a copy of his “skeleton arguments” prior to the hearing. I do not intend to repeat all of the arguments raised in the hearing in full but will summarise them appropriately in the paragraphs which follow.

Claim construction

15 The first step of the test is to construe the claims. I do not think this presents any real problems since both the applicant and the examiner appear to agree as to the meaning of the claims.

Identifying the actual contribution

16 For the second step, it is necessary to identify the contribution made by the invention. Paragraph 43 of *Aerotel/Macrossan* explains that this is to be determined by asking what it is -as a matter of substance not form - that the invention has really added to the stock of human knowledge having regard to the problem to be solved, how the invention works and what its advantages are.

17 The Examiner and Mr Derry have been able to agree the contribution made by the invention, as suggested in Mr Derry’s letter dated 16th March 2015, which is:

“Reducing computation by using a processor to perform a proactive debugging of a transformation script using ontology parameters and providing indications of condition validity determined as part of the debugging operation.”

Does the contribution fall solely within excluded subject matter? Is the contribution technical in nature?

- 18 There is no doubt in my mind that the contribution requires a computer program for its implementation. However, the fact that the invention is effected in software does not mean that it is automatically excluded from patentability as a computer program as such. What matters is whether or not the program provides a technical contribution.
- 19 The task of determining whether the invention provides a technical contribution is a difficult one, as is evident from the plethora of case law in this area. However, I note that both the examiner and Mr Derry have made reference to the ‘signposts’ set out by Lewison J as he then was in *AT&T/CVON*⁵, which I consider to be a useful guide in determining whether the contribution is technical in nature with the caveat that the signposts are not to be treated as an exhaustive list. The signposts were modified slightly by Lewison L J in *HTC v Apple*⁶ and now read as follows:
- i) Whether the claimed technical effect has a technical effect on a process which is carried on outside the computer.
 - ii) Whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the application being run.
 - iii) Whether the claimed technical effect results in the computer being made to operate in a new way.
 - iv) Whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer.
 - v) Whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.
- 20 In their examination report of 9th July 2015, the examiner did not consider the contribution to be technical in nature as it did not, in their opinion, satisfy any of the above ‘signposts’ and concluded that the invention related to a computer program which provides no technical contribution.
- 21 The “proactive validation and debugging” process described in the application does not automatically fix the transformation script errors identified. Instead, the transformation script errors are identified and indicated during the “proactive debugging” process and corrected by a third party developer or the like.
- 22 Mr Derry argued that the invention provided a technical effect under signposts (ii) and (iv) and his arguments offered for these signposts will be analysed below. Arguments relating to the other signposts were not provided.

⁵ *AT&T Knowledge Ventures/Cvon Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

⁶ *HTC Europe Co Ltd v Apple Inc* [2012] EWHC 1789 (Pat)

- 23 In the opinion of Mr Derry, the invention described operates at the level of the architecture of the computer because a technical effect occurs irrespective of the data being processed. While conceding that there is no novel computer architecture as the term is normally used in computer terminology, Mr Derry argued that the signpost (ii) does not require that.
- 24 Whilst I can see an argument to say that the effect of the proactive validation is independent of the data being processed, as any form of data in any standardised structure may be transformed using an appropriate transformation script and the method of “proactive debugging” disclosed, the effect of the validation process does not seem to occur irrespective of the application being run. The invention has at its heart a software application which uses a transformation script to convert data from one format to another with increased processor efficiency provided by proactive validation and early notification of errors which can then be corrected. The computers themselves are entirely conventional, there is nothing new from an architectural point of view and there is no technical effect irrespective of the application being run which would otherwise save the invention from exclusion.
- 25 Mr Derry then argued that running the program made the computer run more effectively and efficiently as a computer because the computer would finish performing the transformation more efficiently than it would have done previously. The transformation script of the invention provides timely error notifications, allowing the transformation of very large data sets to be halted so that error correction in the transformation script can be implemented by a third party. Once the identified errors are corrected, the transformation script can be re-run. Although this describes an efficient method of using computer processor time to transform a large data set, the computer processor itself is no more efficient or effective per se. The timely error notification allows the script errors to be identified, and later corrected, before excessive processor time is wasted.
- 26 The increased processor time necessary if the transformation script contains errors, which was identified as the perceived problem with the prior art (see paragraph 5 earlier) is circumvented by the proactive debugging of the transformation script disclosed. The prior art process states that the entire data source is transformed even if the transformation script initially includes errors. Once the errors are detected and corrected, the entire data source is then transformed again. The method disclosed in the application identifies and indicates transformation script errors when only a small part of the large data source has been processed, saving computer processor time.
- 27 I therefore, can see nothing to suggest that the method for providing a proactive validation of a transformation script as claimed in claim 6 provides a relevant technical contribution sufficient to save it from exclusion as a computer program.
- 28 Turning to claim 1, the apparatus claim, the courts have consistently found that, where claims recite standard hardware, such conventional apparatus does not form part of the contribution. Therefore, an application relating to a computer program cannot be saved simply by claiming conventional computer hardware programmed in a particular way. Jacob LJ specifically rejected the use of standard hardware when

determining the contribution in paragraph 73 of *Aerotel/Macrossan*⁷. When assessing whether a particular invention relates to a new system or arrangement of hardware, the question should be asked whether the system is new in itself or whether the system is only new due to the method it performs.

29 In my opinion, the apparatus as claimed in claim 1 is made up entirely of conventional hardware operating in a conventional fashion and the contribution lies in the functions which the system has been programmed to carry out and does not provide the necessary technical contribution to avoid exclusion as a computer program as such.

30 **Conclusion**

31 In my view, what the applicant has done here is to create a new computer program, albeit a very clever one, which is capable of reducing the processing time required to transform a large structured data source into an object model suitable for data analysis using a transformation script and a proactive validation process for identifying errors in the script which can then be corrected before excessive processing is carried out. In essence, the applicant has created new software using conventional hardware which does not provide a relevant technical contribution and as such would seem to fall squarely within the computer program exemption of section 1(2)(c).

32 In the light of my findings above, I conclude that the invention as claimed is excluded under section 1(2) because it relates to a program for a computer as such. Having read the specification I do not think that any saving amendment is possible. I therefore refuse the application under section 18(3).

Appeal

33 Any appeal must be lodged within 28 days after the date of this decision.

PETER SLATER

Deputy Director, acting for the Comptroller

⁷ *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007] RPC