



PATENTS ACT 1977

APPLICANT Global Analytics, Inc.

ISSUE Whether the invention defined in GB 1419630.7 relates to subject matter that is excluded under section 1(2)(c) as a business method and/or program for a computer as such.

HEARING OFFICER A Bartlett

DECISION

Introduction

- 1 This decision addresses the issue of whether the invention claimed in GB 1419630.7 relates to subject matter that is excluded under section 1(2)(c) as a program for a computer and/or method of doing business as such.
- 2 The application is titled 'Real-time adaptive decision system and method using predictive modeling' (sic) and was filed in the name of Global Analytics, Inc. on 4 November 2014 claiming a priority date of 4 November 2013. It was published as GB 2521749 on 1 July 2015.
- 3 The application has been through one round of substantive examination and amendment and the Applicants (via their attorneys Withers & Rogers) have been unable to persuade the examiner that the invention relates to patentable subject matter. Having reached an impasse, the Applicants declined the opportunity to attend a hearing and consequently the application has been forwarded to me to decide "on the papers".
- 4 I confirm in reaching my decision that I have considered all the correspondence on file.

The application

- 5 The application discloses a method and system wherein a processor is used to make real-time decisions based on input data concerning transactions using a predictive model. The processor automatically builds or rebuilds the predictive model, a rebuild taking place when the performance of the model is judged to be below a predefined threshold. The claims under consideration are those filed on 18 January 2016. Those claims number 49 in total of which claims 1 and 25 are the only independent claims.

Apparatus claim 1 is slightly broader than method claim 25 as it presents the options of building or rebuilding the predictive model whereas claim 25 specifies that the model is rebuilt. For the purpose of this decision I will focus on claim 1 before considering claim 25 and the remainder of the specification if necessary. Claim 1 currently reads:

1. *An adaptive modeling (sic) platform, comprising:
a processor and a memory;
the processor configured to receive a plurality of pieces of data about a transaction;
the processor configured to generate a real-time decision, using a Real Time Decision Engine, based on a predictive model and the plurality of pieces of data about the transaction; and
the processor configured to in response to a plurality of pieces of data about a plurality of transactions automatically one of:
a) build, using a Model Building Module, the predictive model, and
b) rebuild, using the Model Building Module, the predictive model;
wherein the predictive model is rebuilt if it is determined, by a Model Management Module of the platform, that a performance of the predictive model is below a predefined threshold.*

The Law

- 6 Section 1(2) of the Patents Act 1977 sets out various things that are not considered to be inventions for the purposes of the Act. It reads:

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

- 7 These provisions are designated in Section 130(7) as being so framed as to have, as nearly as practicable, the same effect as Article 52 of the European Patent Convention, to which they correspond. I must therefore also have regard to the decisions of the European Patent Office Boards of Appeal that have been issued under this Article in deciding whether the present invention is patentable although I am not bound to follow them.
- 8 These provisions have been the subject of regular consideration by the UK courts. The assessment of patentability under section 1(2) is governed by the judgment of

the Court of Appeal in *Aerotel*¹, as further interpreted by its judgment in *Symbian*². In *Aerotel*, the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of “excluded matter”. Those steps are:

- i. properly construe the claim;
- ii. identify the actual contribution;
- iii. ask whether the identified contribution falls solely within the excluded subject matter;
- iv. check whether the actual or alleged contribution is actually technical in nature.

9 In its judgment in *Symbian* the Court made clear that the *Aerotel* test is not intended to provide a departure from the previous requirement set out in case law, namely that the invention must provide a “technical contribution” if it is not to fall within excluded matter. Thus in deciding whether the invention is excluded as a program for a computer as such I must ask whether it makes a technical contribution (though it does not matter whether I do that at step 3 or step 4).

10 The Courts have also provided additional guidance as to what constitutes a “technical contribution” in the form of the “AT&T signposts” which in their latest form³ 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 applications being run;
- iii) whether the claimed technical effect results in the computer being made to operate in a new way;
- iv) whether a program makes a 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.

11 In assessing whether the current invention is excluded or not, I will follow the *Aerotel* approach as interpreted in *Symbian* and use the signposts to assist in identifying any technical contribution.

¹ *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7

² *Symbian Ltd's Application* [2008] EWCA Civ 1066, [2009] RPC 1

³ As modified by the Court of Appeal in *HTC Europe Co. Ltd. v Apple Inc.* [2013] RPC 30

Applying the *Aerotel* test

- 12 Step 1 of the *Aerotel* test requires me to properly construe the claim. This does not cause any particular difficulties in the present case. Claim 1 as stated above relates to an adaptive modelling platform whereby a processor is used to make real-time decisions based on data input concerning a transaction using a predictive model. The processor automatically either builds or rebuilds the predictive model and if the model is rebuilt it is done when the performance of the model is below a predefined threshold. As noted by the Applicants via their attorneys, the claim does not specify the nature of the transaction but I note from the description that the only specific uses of the platform envisaged in the specification are to make decisions in areas such as credit authorisation, fraud detection, targeted marketing, customer care, price optimisation and the like.
- 13 Moving on to step 2, guidance on how to identify the contribution is given in paragraph 43 of the *Aerotel* judgment where the court accepted the proposition that identifying the contribution is ‘an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at substance not form – which is surely what the legislator intended’.
- 14 The description makes clear that the aim of the invention is to provide a model that is able to receive and analyse large amounts of rapidly changing data to enable reliable decisions on transactions to be taken, the model rebuilding itself when its performance falls below a threshold standard. Whilst it is claimed in terms of “an adaptive modelling platform comprising a processor and a memory” there is no suggestion anywhere in the specification that the hardware on which the invention is implemented is anything other than conventional; any contribution resides in what it is programmed to perform. In substance that is a claim to a computer program. Furthermore, there is no suggestion that the contribution resides in the particular modelling technique employed; indeed the specification goes so far as to say that the invention is agnostic of the modelling technique employed. The advantages of such a system are also clear from the description – it enables decisions on whether to proceed with these transactions to be taken more quickly and more reliably with reduced human intervention (and thus with less risk of associated error). Bearing all this in mind I consider the alleged contribution to be a computer program which embodies an adaptive modelling system for analysing data and making decisions relating to transactions in which the model monitors its performance and updates itself when its performance falls below a certain threshold.
- 15 Step 3 requires me to determine whether that contribution falls solely within excluded subject matter. I have no doubt that it does for the reasons given by Birss J (as he then was) in paragraphs 32 and 33 of his judgment in *Halliburton*⁴. Thus whilst finding that the invention is implemented as a program for a computer is not the end of the matter,

“The question (of whether an invention which is implemented in computer software is patentable) is decided by considering what task it is that the program (or the

⁴ *Halliburton Energy Services Inc* [2011] EWHC 2508 (Pat)

programmed computer) actually performs. A computer programmed to perform a task which makes a contribution to the art which is technical in nature, is a patentable invention and may be claimed as such.

33. If the task the system performs itself falls within the excluded matter and there is no more to it, then the invention is not patentable.”

- 16 The task performed by the program of claim 1 is the generation of a decision relating to a transaction using a predictive model. From the description it is clear that the transactions envisaged in the present case are financial ones and the decision is whether to proceed with such a transaction (for example whether to authorise a loan). I consider that task to be a method of doing business and thus the invention to be excluded as a computer implemented method of doing business.
- 17 Whilst not strictly necessary, for the sake of completeness I shall also consider the contribution using the *AT&T* signposts.
- 18 As regards the first signpost, I have to consider if there is a technical effect on a process which is carried on outside the computer. The only process that might possibly be being carried on outside the computer is the transaction itself and since that is excluded, it can in no way point to the present invention being patentable. Thus the first signpost does not assist the applicants.
- 19 It is also abundantly clear to me that signposts ii), iii) and iv) do not point to the invention making a technical contribution. There is no technical effect at the architecture level of the computer – rather the effect is limited to the specific application of generating decisions relating to transactions. The computer is not programmed to operate in a new way (except in the sense that any novel program makes a computer operate differently). Nor does the program make the computer run more efficiently and effectively as a computer: whilst the invention might result in more reliable decisions being taken, it does not make the computer a better computer.
- 20 Finally I do not consider this to be the sort of invention where considering signpost v) offers any assistance in reaching the correct decision.
- 21 The final step of the *Aerotel* test is to check whether the actual or alleged contribution is actually technical in nature. I have already answered that above – the invention is a computer implemented business method. It is not technical in nature. In coming to this conclusion I am further reassured that this outcome is consistent with a number of earlier hearing Officer decisions related to iterative modelling, for example BL 0/124/16, BL 0/057/15 and BL 0/152/14.
- 22 Whilst independent claim 25 is of a slightly different scope, that has no material impact on whether the invention defined by it is excluded: the contribution made by the invention defined in claim 25 also falls solely within excluded subject matter as a program for a computer and/or a method of doing business.

Other matters

- 23 I note that all other aspects of examination including novelty and inventive step have been deferred pending resolution of the excluded matter objection.

Decision

- 24 I have found that the contribution made by the invention defined in claims 1 and 25 falls solely in subject matter excluded under section 1(2) as a program for a computer and/or a method of doing business as such. I have carefully considered the specification as a whole including the remaining claims but can identify no amendment that could reasonably be expected to form the basis of a valid claim. I therefore refuse this application under section 18(3).

Appeal

- 25 Any appeal must be lodged within 28 days.

A Bartlett
Divisional Director, acting for the Comptroller