

PATENTS ACT 1977

APPLICANT	IGT
ISSUE	Whether patent application 0916751.1 complies with section 1(2)
HEARING OFFICER	Jim Houlihan

DECISION

- 1 The applicant has requested a 'decision on the papers' on patent application GB0916751.1 as the examiner has objected that the claims are excluded from patentability by virtue of section 1(2)(c) of the Act.
- 2 The application is entitled "*multiple monetary type gaming machine with cash conversion functionality*". It derives from a PCT application, PCT/US2008/071582, which has a priority date of 24 August 2007 and was published as WO2009/029372 on 5 March 2009. The UK application was subsequently published as GB2460364 on 2 December 2009. The applicant company, based in the United States, is represented by Hepworth Browne for whom the correspondent was Dr Robin Browne, a patent attorney.
- 3 In the first of three examination reports between January and December 2012 the examiner (Mr Hole) asked the applicant to respond to the International Preliminary Examination Report on Patentability (24 February 010) which raised an inventive step objection on the basis of four patent documents. The examiner also expressed his *prima facie* view that the claims did not meet the requirements of patentability insofar as they appeared to relate to a "*scheme, rule or method for doing business and/or a computer program and/or a scheme, rule, or method for playing a game...as such*".
- 4 In subsequent examination reports the examiner indicated that his objections to inventive step and also added matter had been overcome by amendment.
- 5 Regarding patentability, the examiner agreed with Dr Browne that the claims did not fall foul of the exclusion in respect of a scheme, rule or method for playing a game. However, he pressed his objection that the claims relate to a business method, as such, and raised the possibility that the claims also relate to a computer program, as such. Dr Browne responded to the examiner's reports in three rounds of detailed correspondence.

- 6 The main issue I need to decide is whether the claims relate to a business method, as such. I will also consider whether the claims relate to a computer program, as such.

The application

- 7 The application concerns game playing services in game machines, such as slot machines or video poker games, in which different currencies can be used to wager bets. Returns to gaming patrons can be cash “wins”, prizes or restricted credits (also known as “promotional credits”), the latter being a form of credit limited to further use in the gaming operator’s systems. The thrust of the application is to enable restricted credits in gaming machines that accept two or more currency types – (i) “native” that is in the country where the gaming machine is present and (ii) non-native which is a currency from another country. Currency conversions can result in unconverted amounts (also called “lost” or “left-over” amounts). The alleged invention is designed to allow the gaming machine to operate under different exchange rates, which can depend on the situation or status of a player and for players to accrue their left-over amounts, especially as restricted credits. The application says that this can help ensure that players obtain more favourable conversion rates and that non-convertible amounts are minimised. This, the application suggests, brings positive benefits in terms of how the game machines are perceived by patrons and would discourage the use of gaming machines for illegal reasons such as non-trackable currency exchange kiosks.
- 8 The application contains three independent claims. Claim 1 relates to a gaming machine. Claim 12 details a method for a multi-currency gaming machine and claim 18 relates to a computer readable material with instructions for controlling a gaming machine.
- 9 The examiner focussed on claim 1 and regarded the other independent claims, 12 & 18, as being of similar scope. I agree and note that Dr Browne did not disagree with this approach. The reasoning in this decision therefore applies to claims 12 and 18 as well as claim 1.
- 10 The latest version (4 December 2012) of claim 1 reads:

A gaming machine comprising:

a memory;

an input device configured to receive a first currency value for play of a wager-based game, the first currency value being of a non-native currency type; and

one or more logic modules configured to:

retrieve, from the memory, a first left-over amount being of the non-native currency type;

determine a total non-native currency value, the total non-native currency value including the first currency value and the first left-over amount;

convert the total non-native currency value to a total native currency value, the total native currency value being in a native currency type of the gaming machine,

determine whether there is an unconverted amount, the unconverted amount being an amount of the total non-native currency value that is not converted into the native currency type of the gaming machine,

determine a returnable amount and a second left-over amount based on the unconverted amount, the second left-over amount being an amount of non-native currency type that was not converted to the native currency type and that is not returned by the gaming machine;

wherein the memory stores the second left-over amount.

The law

- 11 Section 1(2) of the Patents Act 1977 sets out the categories of subject matter which are excluded from patenting. 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) a discovery, scientific theory or mathematical method;

b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;

c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer; d) the presentation of information.

- 12 In his letters Dr Browne expresses a broad range of views about the case law concerning excluded matter, from both domestic courts and decisions of the European Patent Office (EPO). A lot of his correspondence is of a discursive nature that one might expect to find in a commentary in a law journal. My approach has been to take account of the case law where I have been able to establish a link between a point of detail or fact in the present application and a relevant point of law in the authorities to which Dr Browne refers.
- 13 In more than one instance, Dr Browne levels criticism at UK authorities such as the Court of Appeal judgements in *Aerotel and Symbian* and also some EPO decisions. For example, he says (paragraph 3.1, 5 September 2012) *“with respect to the assessment of excluded subject matter, the decisions in both Symbian and AT&T/CVON provide a degree of arbitrariness with respect to the assessment of when invention takes on patentable merit. This is an unacceptable legal position”*. Moreover, he says in his final letter (8 February 2013) *“Precisely how Lord Neuberger’s instruction (in Symbian) modifies Aerotel is not clear or is not precisely understood but what it does confirm is that to some extent Aerotel is fundamentally flawed and any tests developed from the premise of Aerotel cannot pass the test of time.”*
- 14 Dr Browne also refers to several EPO decisions, putting store in some while calling others into question. For example, he discusses T641/00 at some length and says (paragraph 3.14, 4 December 2012) that it *“provides no real and clear*

guidance...provides no consistent and reasonable approach.... fails to provide an objective test and framework.....leaves the assessment of what constitutes invention and technical contribution open to abuse and/or subjectivity”.

- 15 In contrast, he regards the EPO decisions T1769/10 and T1051/07 favourably in both his letters of 5 September and 4 December 2012 and suggests in his final letter of 8 February 2013 that T1769/10 should be followed. I have considered these two decisions in my analysis below.
- 16 As a hearing officer, I am bound to follow the law as interpreted by the UK Courts. Accordingly, I will use the four step *Aerotel* test established by the Court of Appeal, which has been affirmed subsequently by that court in *Symbian*.
- 17 The *Aerotel* test is as follows:
 - I. *Properly construe the claims*
 - II. *Identify the actual or alleged contribution*
 - III. *Determine whether the actual or alleged contribution falls solely within excluded matter*
 - IV. *Check whether the actual or alleged contribution is actually technical in nature*
- 18 Section 130(7) of the Patents Act indicates the provisions of this Act *inter alia* in respect of excluded matter are the same as those of the European Patent Convention. It includes the phrase which reads “*it is hereby declared that the following provisions of this Act, that is to say, sections 1(1) to (4), 2 to 6, 14(3), (5) and (6), 37(5), 54, 60, 69, 72(1) and (2), 74(4), 82, 83, 100 and 125, are so framed as to have, as nearly as practicable, the same effects in the United Kingdom as the corresponding provisions of the European Patent Convention*”. In effect this means, as a matter of general principle, that I should take account of the decisions of the EPOs Enlarged Board of Appeal and Boards of Appeal. Indeed, the UK courts have consistently affirmed that EPO case law is persuasive but not binding in relation to questions of patentability under the UK Patents Act.
- 19 I note, in particular, that Dr Browne refers to a case, G03/08, of the EPO Enlarged Board of Appeal. The point at issue in G03/08 was whether there was divergence in the EPOs case law on computer programs. While the Enlarged Board declined to answer the specific questions put to it in G03/08 it considered there was no divergence in the case law of the EPOs Boards of Appeal regarding the patentability of computer programs. Moreover, I note that in *Symbian* the Court of Appeal regarded the EPO decision of *Duns Licensing* (T154/04) as consistent with *Aerotel* and also commented it was fortified in its judgement by the EPO decision in *Gameaccount* (T1543/06), both decisions to which Dr Browne refers.
- 20 On the basis of the above considerations, I will take account of EPO case law cited by Dr Browne to the extent that it assists me in forming my decision in line with the *Aerotel* test and the law established by other domestic authorities.

- 21 I detail below UK and EPO case law that has been brought to my attention by Dr Browne and which I have applied to this decision. Some of these cases were also cited by the examiner.

UK authorities

Merrill Lynch's application [1989] RPC 19

Aerotel Ltd v Telco Holdings Ltd; Macrossan's Application, Court of Appeal [2007] RPC 7 (hereinafter referred to as "Aerotel")

Symbian Ltd v Comptroller-General of Patents, Court of Appeal, [2008] EWCA CIB 1066, [2009] RPC 1 (hereinafter referred to as "Symbian")

AT&T Knowledge Ventures LP Application and CVON Innovations Ltd's Application v Comptroller-General of Patents [2009] EWHC 343 (Pat) High Court (hereinafter referred to as "AT&T")

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

EPO authorities

G03/08 - Programs for computers

T641/00 - Comvik

T1051/07 - SK Telecon

T1769/10 - IGT

- 22 In the closing remarks in his final letter (8 February 2013) Dr Browne says "*any adverse decision should therefore make the case as to why the threshold questions raised in the written file are not applicable or how or why there is no technical contribution in the pending claims*". Aerotel and other UK authorities indicate that the exclusions detailed in section 1(2) of the Act are distinct categories, not categories having a relative scale. Either something falls within an exclusion or outside it. There is no "in-between" threshold. Dr Browne drawing on his views on EPO and UK case law poses six questions that he considers should be used to approach questions of excluded matter in this case (section 5, 4 December 2012). As I have already stated, I am beholden to follow the *Aerotel* test and I will carefully consider the points he raises in his six questions in applying that test.
- 23 Before addressing the *Aerotel* steps it is worth reflecting at this juncture on what the Court of Appeal said in *Merrill Lynch* which is a leading case concerning business methods: "*The prohibition in section 1(2)(c) is generic; qualitative considerations do not seem to be material. The section draws no distinction between the method by which the mode of doing business is achieved*".

Argument and analysis

- 24 Applying *Aerotel*, firstly I must construe the claims. Claim 1 reads clearly at it stands and presents no issues of construction. As the examiner outlines in his pre-hearing report (21 December 2012) claim 1 details a gaming machine comprising a memory; an input device, the input device configured to receive a first currency value of a non-native currency type for the play of a wager-based game; and one or more logic modules. The gaming machine determines whether there is an unconverted amount of a non-native currency and stores that in the machine's memory.
- 25 The second step is for me to identify the contribution the alleged invention of claim 1 makes. The *Aerotel* judgement provides some useful guidance regarding step 2:
- [43] "It 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".*
- 26 Dr Browne makes several points which I consider to be relevant to step 2. In his second letter (paragraph 3.4, 5 September 2012) he states: *"The present claims are directed at a gaming machine and method for converting non-native currency to the native currency of the gaming machine. More specifically, the claimed invention provides a mechanism to utilise left over amounts. After the gaming machine converts a non-native value to a native value and determines that there are left-over amounts, the claimed gaming machine stores the left-over amounts in memory rather than overlooking or ignoring the left-over amounts. These stored amounts are summed over time to provide additional benefit to the player based on a universe of players, with this benefit causing the gaming machine to operate in a different fashion by providing access to accumulated game credits that are directly based on the summed left over amounts."*
- 27 He follows this in the same letter (paragraph 3.7) by saying *"...the gaming machine (or gaming network) operates, over time to optimize its playability for one or more (but not consecutively) different patrons of game play sessions"*.
- 28 In particular, it seems that Dr Browne considers that a technical solution is provided by the mechanism to account for and utilize left-over amounts that are typically ignored. While the examiner's synopsis of the contribution that the alleged invention makes (pre-hearing report 21 December 2012) is not incompatible with Dr Browne's, I do recognise that Dr Browne takes a broader view of the alleged contribution. Given that this is a request for a decision by Dr Browne I will use his submissions regarding the alleged contribution in my analysis in the next step, *Aerotel* step 3.
- 29 Throughout his submissions Dr Browne has consistently, and to my mind correctly, asserted, either directly or indirectly, that the important issue is whether the invention makes a technical contribution. Essentially, he argues that if an invention has a technical aspect then it does not relate solely to excluded matter. I would agree that this is the critical question underlying *Aerotel* step 3.
- 30 The UK courts have often acknowledged the inherent difficulty in defining the boundary line between what is technical and what is not (as per Neuberger LJ in

paragraph 30, *Symbian*). The recent case of *Halliburton* provides some useful guidance in relation to deciding business method exclusions. In that case Birss HHJ said:

- 31 [35]. *“The business method cases can be tricky to analyse by just asking whether the invention has a technical effect or makes a technical contribution. The reason is that computers are self evidently technical in nature. Thus when a business method is implemented on a computer, the patentee has a rich vein of arguments to deploy in seeking to contend that his invention gives rise to a technical effect or makes a technical contribution. For example the computer is said to be a faster, more efficient computerized book keeper than before and surely, says the patentee, that is a technical effect or technical advance. And so it is, in a way, but the law has resolutely sought to hold the line at excluding such things from patents. That means that some apparently technical effects do not always count. So a computer programmed to be a better computer is patentable (Symbian) but as Fox LJ pointed out in relation to the business method exclusion in Merrill Lynch, the fact that the method of doing business may be an improvement on previous methods is immaterial because the business method exclusion is generic”.*
- 32 A general theme running throughout Dr Browne’s submissions is that there are two questions to ask when considering technical contribution: what contribution the invention makes and how that contribution is made. Under the header of his six questions in his second letter (paragraph 5.0 Qu. 1(i), 4 December 2012) he reinforces his view that the “what” question is of primary importance although elsewhere in his submissions he does also give some credence to the question of “how”.
- 33 While I am not aware of any decisions which partition the issue of technical contribution precisely under the headers of “what” and “how” I am content to consider Dr Browne’s questions in this respect. As he correctly points out, the issues of “how” and “what” an alleged technical contribution might be can be found in several UK and EPO authorities.
- 34 I turn to the main element of Dr Browne’s submission - that the primary question is “what” the invention achieves. In support of his “what” argument he cites HHJ Birss in *Halliburton* who said *“the question is decided by considering what task it is that the program (or the programmed computer) actually performs”* (paragraph 3, 4 December 2012). This is reinforced in his final letter (paragraph 2, 8 February 2103) which reads *“what does the claimed invention do or achieve in the real world”.*
- 35 Dr Browne also says in his second letter (paragraph 3.6, 5 September 2012) *“The claimed gaming machine provides a technical solution by providing a mechanism to account for and utilize left-over amounts that are typically ignored”*. He follows this in the next paragraph saying *“The claimed invention therefore modifies the operation of the gaming machine or player tracking system in the real world”*.
- 36 Among the earlier comments in his submissions Dr Browne raises a general question by saying *“is it not the advantage in practical reality that inherently establishes technical contribution and the presence of patentable subject-matter, of course, to conventional considerations of novelty and non-obviousness over the prior art?”* (paragraph 3.9, 5 September 2012). He also emphasises this in his final letter

of 8 February 2013 referring to *Symbian*. It is true that *Symbian* focuses the question of patentability on what the consequences of the alleged invention are in practical reality.

- 37 However, I have to disagree with Dr Browne's reasoning on these points in relation to the present case. I do not think that "practical advantage" merely equates with "technical contribution" as he implies. Clearly, many things in the excluded categories, computer programs, business methods, mathematical methods etc., can bring about practical advantages but obviously the legislator considered that those things should not be the subject of patents. Plainly, in my view, a stronger basis for technical contribution is required.
- 38 So I return to the question of step 3 - does the contribution which I have identified in Dr Browne's submissions regarding "what" the alleged invention achieves, the contribution it makes, fall entirely within the field of excluded matter? I consider it does. To my mind, the logic modules are processing currency. Currency transactions alone are inherently a method of business. Thus, I conclude that Dr Browne's view in relation to the contribution the alleged invention makes in "*providing a mechanism to account for and utilize left-over amounts that are typically ignored*" entirely concerns a business method. What the alleged invention achieves is a business transaction.
- 39 Moreover, I think Dr Browne's comments which I have referred to earlier in paragraph 26 under step 2 of *Aerotel*, refer squarely to business benefits. His comments read (paragraph 3.4, 5 September 2012) "*these stored amounts are summed over time to provide additional benefit to the player based on universe of players, with this benefit causing the gaming machine to operate in a different fashion by providing access to accumulated game credits that are directly based on the summed left over amounts*". I think on the plain reading of this phrase one would invariably come to the conclusion that what the computer does is to produce a business benefit, utilising conventional computer hardware and systems.
- 40 Regarding Dr Browne's point of "real world" impact in my view any system of doing business (or a computer program for that matter) could be said to ultimately have an impact in the "real world" - why else would it exist? To me, the "real world" test, which is inherently very broad, cannot be in line with what the legislator intended in creating the exclusions to patentability. Thus, having carefully considered Dr Browne's point that the alleged invention "*modifies the operation of the gaming machine or player tracking system in the real world*" I am of the opinion that the modification he so claims is a business modification, not a technical modification.
- 41 Some of the signposts in *AT&T* have parallels with Dr Browne's "real world" point and are worth considering here. Signpost 1 reads "*whether the claimed technical effect has a technical effect on a process carried on outside the computer.*" The answer in respect of the alleged invention is that it does not. The effect outside the computer is redeeming the game player for unconverted currency. In particular, the effect outside the transactional function of the logic modules is on the conversion of currency and the ensuing benefits that these transactions can bring to patrons and game operators alike. Those effects and benefits cannot, to my mind, be considered as technical. Rather they are business benefits.

- 42 Signpost 3 reads “*whether the claimed technical effect results in the computer being made to operate in a new way*”? In my view, the computer itself does not operate in a new way. I appreciate that the consequences of its functions, its programming, i.e. currency conversation, might be new and I accept that the patron would find that the computer operates in a “new way” in terms of the facility it provides. But this “new” operation is a new business facility, a transactional enhancement, not a technical one.
- 43 I return to Dr Browne’s general submission that the “*computer operates better, faster, more secure and/or more reliable fashion*” (paragraph 3.25, 4 December 2012). In using the alleged invention the patron gets a better business deal of not losing out on unconverted amounts and the game owner obtains benefits in terms of perception and minimising illegal activity. I agree that the alleged invention make the transactions better, more reliable and secure but this is entirely as a result of the “new” business function provided by the computer. It is not in my view, however, a result of a new technical function.
- 44 It seems that Dr Browne’s “how” question could be considered under *Aerotel* step 4. However, steps 3 and 4 are often interwoven and indeed the Court of Appeal in *Aerotel* itself suggests that step 4 might not be necessary if the question it poses has already been covered by the third step. In any event, what the UK authorities call on me to do is to thoroughly consider whether the alleged contribution is technical in nature.
- 45 I will now address the question of whether “how” the invention works is technical in nature under the header of step 4 of *Aerotel*. Dr Browne emphasises his general views on technical contribution (paragraph 3.14, 5 September 2012) by saying “*It is submitted that the issue of “technical contribution” or “technical effect” is actually the point where the skilled person is able unambiguously to derive the merest scintilla of an advantage that causes in practical reality the technical implementation of the claimed arrangement to operate in a better, faster, more secure and/or more reliable fashion*”. He repeats this in the following letter (paragraph 3.14, 4 December 2012) and adds “*in the present case the gaming machine as a whole operates in a better fashion as acknowledged in the final sentence of the current (31 May 2012) examination report*”.
- 46 In framing his “how” question Dr Browne refers to the principle of a technical effect and precedes this by saying “*there is a better technically implemented solution that brings about a functional change to the way in which the gaming machine’s logic is configured to operate*” i.e. the “how” aspect” (paragraph 3.6, 4 December 2012).
- 47 In relation to the “how” question Dr Browne draws on two EPO’s decisions, T1769/110 and T1051/07, where the issue under consideration was the inventive step in mixed inventions. In T1051/07, the problem of “how” to reload a bank account was considered to involve a technical means to a technical solution on the facts particular to that case. T1769/10 (in the name of the present applicant) concerned a gaming system and the handling of customer account management. Dr Browne highlights a particular passage in T1769/10 which reads “*the objective technical problem to be solved may be formulated more specifically as how to implement technically the aim in the non-technical field, or reworded, to provide a technical*

solution involving a technical means how to achieve the aim in the non-technical field' (paragraph 3.11, 5 September 2012).

- 48 Given that both T1051/07 and T1769/10 are in the same field as the present application and that they address the question of technical contribution in mixed inventions, I consider it is appropriate for me to take both of them into account in applying the *Aerotel* test. However, I should add that in forming this view I do not need to come to a determinative view about the applicability of the T1051/07 and T1769/10 to answering the *Aerotel* questions in general. Rather, T1051/07 and T1769/10 each present a discrete point which is applicable to the particular facts of the present case.
- 49 I will consider whether “how” the alleged contribution is achieved as outlined above is technical. I note that no reference is made to aspects of the hardware or software which could be considered to have technical role. Nor am I directed to a particular passage in the specification in support of this point. I assume therefore, and indeed from studying the specification myself, that the hardware, processors and information processing functions of the gaming machine are well known and conventional. Thus, I cannot find a technical element in the alleged contribution. Rather, to me the process by which the alleged invention “works”, i.e. how it works, is entirely a business process. It calculates and moves currency electronically and turns that currency into other value systems (prizes, credits etc.). It is not technical in nature.
- 50 Thus, on account of my considerations under *Aerotel* steps 3 and 4 above I regard the contribution that the alleged invention makes falls wholly within subject matter which is excluded on account that it relates to a method for doing business, as such, and that it is not technical in nature.
- 51 Briefly, for completeness, I will consider whether the alleged invention also relates to a computer program as such. It is well established law that in deciding cases of patentability the substance of the claim is germane, so called “substance over form”.
- 52 A passage in the specification reads (page 24 line 31-page 25 line 17) “*a currency conversion logic module and a bill validator firmware module. These are intended to represent logical components that contain software implemented in a gaming machine or a gaming network.*” The remainder of the paragraph goes on to discuss the various software/firmware components. Clearly, this relates entirely to a computer program. I cannot find anything in the specification to indicate a feature of the claim which is operated by anything other than a computer program. There is a reference to the manual control of currency exchange rates on page 33 lines 18-24 but these are implemented in software. The potential for manual control is, in my opinion, incidental. I note that Dr Browne does not make any reference to it in his submissions about the alleged technical contribution of the alleged invention.
- 53 Birss HHJ in *Halliburton* provides some helpful analysis in resolving the difficulty of mixed inventions. He says:

[36]. “The Aerotel approach is a useful way of cutting through the cases like Merrill Lynch, Macrossan and Gale in which more than one exclusion is engaged. Take a patent claim consisting of a claim to a computer programmed to perform a business method. What has the inventor contributed? If the answer is a computer program

and method of doing business and there is nothing more present, then the contribution falls solely within the excluded subject matter. It can be seen not to be patentable at step 3, before one gets bogged down in the argument that about whether a book keeping system running more efficiently on a computer is a technical effect. Following Aerotel the question has answered itself”.

- 54 He adds at paragraph 39 “*So in Merrill Lynch and Macrossan the computer programs were unpatentable because the task the program performed was a business method”.*
- 55 In my view the specification is entirely confined to the operation of the alleged invention, the identified contribution, on a computer. For this reason, I find that the claims also relate to a computer program as such.

Conclusion

- 56 I hold that claim 1 and each of the claims in the application are not patentable as they relate entirely to a method for doing business and a computer program as such. I cannot see any saving amendments in the application and Dr Browne has offered none. I therefore refuse the application.

Appeal

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

Jim Houlihan

Deputy Director Acting for the Comptroller