

PATENTS ACT 1977

APPLICANT

IGT

ISSUE

Whether patent application number
GB 0602813.8 complies with section 1(2)

HEARING OFFICER

R C Kennell

DECISION

- 1 This application, which relates to a gaming apparatus and method, results from the entry into the UK national phase of international application no. PCT/US2004/025132, which was filed on 3 August 2004 and claimed a priority of 11 August 2003 from an earlier US application. The international application was published under serial no. WO 2005/16473 A2 on 24 February 2005 and was reprinted under serial no. GB 2 420 681 A upon entry to the national phase.
- 2 Despite amendment of the claims during substantive examination, the applicant has been unable to persuade the examiner that this is a patentable invention within the meaning of section 1(2) of the Act. This matter therefore came before me at a hearing on 19 March 2008. The applicant was represented by its patent attorney, Mr James Morgan, and the examiner, Mr Joe McCann, assisted via videolink.

The law and its interpretation

- 3 Section 1(2) 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;

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.”

4 It is not disputed that the assessment of patentability under section 1(2) is now governed by the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan’s Application* [2006] EWCA Civ 1371, [2007] RPC 7 (hereinafter “*Aerotel*”). In this case the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

- 1) Properly construe the claim
- 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
- 4) Check whether the actual or alleged contribution is actually technical in nature.

5 The operation of the 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. Paragraphs 46-47 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 which consists solely of excluded matter will not count as a technical contribution.

Arguments and analysis

The prosecution history of the application

6 Where if at all the invention lies has been a matter of some uncertainty and I think it will be helpful to explain in some detail the course of the arguments on this during the prosecution of the application. Initially the examiner deferred full examination until the major substantive issues in the international preliminary report on patentability issued on behalf of the International Searching Authority (ISA), had been addressed. The report appeared to raise issues both of excluded matter and of lack of novelty and inventive step, the former hinging on the difference from the closest prior art being non-technical in that the player experienced more excitement when playing on a game with a 3D display.

7 Although the applicant made amendments to restrict the number of independent claims, it retained apparatus and method claims 18 and 46 from the original specification. In these claims, two-dimensional (2D) image data is converted into three-dimensional (3D) image data from which a non-planar 3D video image representing a game is generated on a non-planar 3D display screen. Mr Morgan maintained in his letter of 17 August 2007 that “in the context of the claimed apparatus” the concept of converting 2D image data into a 3D video image was a technical process which provided for a better 3D image on a non-

planar surface and was novel and inventive in relation to the prior art documents cited by the ISA.

- 8 However, whilst the examiner accepted that the conversion was a technical process, he maintained that the contribution of the invention did not reside in the conversion process but in the use of a 3D display in a gaming machine. He argued in his report of 22 October 2007 that this contribution did not result in a technically better gaming machine but merely in a more attractive game format, so that the invention was excluded as the presentation of information. On reconsideration in a later report on 7 January 2008 he thought the contribution was also a means for playing a game implemented via a computer program, which was therefore excluded as a scheme, rule or method for playing a game and as a program for a computer.
- 9 In his letter of 5 February 2008 Mr Morgan felt that the examiner had failed to take proper account of his argument, which he summarised as follows:

“As stated in the specification, ‘non-planar displays, such as the three-dimensional display screen 1500, may cause brightness and image distortions when displaying a planar image, in addition to lateral secondary color aberrations from ultra-wide lenses in the projection lens assembly 1400’ (Page 34, lines 28-31). Thus, the technical feature of the conversion of two dimensional image data to three dimensional image data on to a non-planar display corrects for image distortion, color aberration, brightness distortion, etc. when projected onto the non-planar surface of the three-dimensional display screen. As such the technology provides for a better 3D image on non-planar surfaces.”

He proposed to emphasise the feature of image correction by incorporating into the main claims the further limitation of correction of the 2D image data for at least one of image distortion, brightness distortion and color aberrations when it was displayed on the 3D surface.

- 10 The above quotation however suggests that the correction and conversion are one and the same operation, as does the wording of the specification at several places where reference is made to converting 2D data to 3D “by correcting” for distortions (see e.g. page 2 lines 8-10 and 20-23). However, at the hearing Mr Morgan explained that the correction did not itself make a 3D image, but made it displayable without distortion so that when projected on to a 3D screen it would be seen in 3D form.
- 11 In the specification as originally drafted the description and claims all relate to gaming apparatus and methods, and I cannot see anything to suggest that the correction of the image might be inventive in its own right. However, at the hearing Mr Morgan alleged that this was in fact the case. He therefore proposed to recast the apparatus claim in the following form, the wording which I have italicised constituting in his view an irrelevant limitation which ought never to have been included in the main claims (the underlined wording is discussed further below):

“An apparatus comprising:

a display unit capable of generating a non-planar, three-dimensional video image, said display unit comprising a non-planar, three-dimensional display screen capable of displaying said non-planar, three-dimensional video image;

an input device;

a controller operatively coupled to said display unit and said input device, said controller comprising a processor and a memory operatively coupled to said processor,

said controller being programmed to convert two-dimensional image data into three-dimensional image data,

said controller being programmed to cause a non-planar three-dimensional video image to be generated on said display unit from said three-dimensional image data and to correct said two-dimensional image data for at least one of the following: image distortion, brightness distortion and colour aberrations when said two-dimensional image data is displayed on said non-planar, three-dimensional display screen as a video image, *said apparatus being restricted to apparatus for playing a game, said input device being a value input device and said controller being programmed to allow a person to make a wager; said non-planar three-dimensional video image representing a game, and*

said controller being programmed to determine, after said non-planar three-dimensional video image has been displayed, a value payout associated with an outcome of said game represented by said three-dimensional video image.”.

- 12 Applying the *Aerotel* test, Mr Morgan therefore considered that on a proper construction the above claim was to an apparatus which was capable of converting 2D images to 3D images so that they could be seen without significant distortion and the contribution of the invention was the correction technique which produced that result. The examiner however believed that distortion was a known problem when 2D image data was converted to 3D and that the skilled man would be able to make the necessary corrections without inventive effort.
- 13 Mr Morgan pointed out that the examiner had produced no prior art to back up that argument. Whilst he accepted that it was known to generate shading electronically in order show 3D data on a 2D screen, he thought this did not involve the distortion correction techniques that would be necessary to enable it shown on a 3D surface. I thought that Mr Morgan’s point was a fair one and considered it desirable for further investigation of this point before reaching any conclusion on what the contribution was. I therefore asked the examiner to conduct a supplementary search. This yielded some further documents which the examiner considered to disclose the use of software for the distortion correction of 3D displays (two of which had in fact already been cited as background documents in the international search report).
- 14 In a letter dated 11 April 2008 I invited submissions from Mr Morgan on these documents, and also on the documents cited in the prior art disclosure statement by the applicants to the US Office which Mr Morgan had filed with his letter of 17

August 2007 (some of which I had drawn attention to at the hearing). I also drew attention to a number of High Court judgments on section 1(2) since Mr Morgan's last substantive letter of 5 February 2008 before the hearing, and gave an opportunity (which was not taken up) for comment on these should the applicant so wish.

- 15 In two submissions dated 9 and 11 May 2008 Mr Morgan filed extensive comments on the prior art. He also filed a revised specification in which the apparatus claim above was amended by deletion of the underlined wording; the controller now therefore had to be programmed to correct for all three of image distortion, brightness distortion and colour aberration. A corresponding method claim was also included. Mr Morgan argued that in the light of the prior art (including all the documents cited on the US disclosure statement) the contribution of the invention was a 3D display which avoided moving elements and electronically permitted the correction of brightness distortion and colour aberration as well as image distortion. He considered this to be a technical contribution which did not amount to the mere presentation of information or to a means of playing a game implemented by a computer.

Application of the *Aerotel* test

- 16 I will now apply the *Aerotel* test to the new claims. As regards the first step, I do not think that any problems arise over their construction.
- 17 Turning to the second step, I do not think that the contribution can now be said to lie merely in the use of a 3D display in a gaming machine. Although it may not have been apparent from the drafting of the original specification, it seems to me that in the light of the prior art the contribution does in fact lie in the correction technique. I broadly accept what Mr Morgan now alleges to be the contribution, although, given that the claims are specifically limited to apparatus for playing a game and a method for operating the apparatus, I would include as part of the contribution the fact that the 3D display is for specific use in gaming apparatus.
- 18 With or without this further limitation, I do not think that the contribution can be said to relate solely to the excluded categories mentioned by the examiner (the presentation of information, a program for a computer and a method for playing a game), either alone or in combination. In my view, although the correction of the image is achieved by a programmed computer (the controller comprising a processor and a memory), the programming embodies a technical process lying outside the computer. Further, the correction of the image would seem to be merely ancillary to the actual playing of a game on the apparatus and also to go beyond the mere presentation or expression of information.
- 19 The contribution therefore passes the third *Aerotel* step and, going on to the fourth step, I am satisfied that it is technical in nature.

Conclusion and next steps

- 20 I do not therefore think that any objection under section 1(2) can be sustained against the claims which Mr Morgan is now proposing. I will therefore remit the

application to the examiner to consider whether the invention as now claimed is in fact novel and involves an inventive step (including whether any further search is necessary), and to deal with any other outstanding matters.

- 21 The compliance period prescribed by rule 30 of the Patents Rules 2007 for putting the application in order has been extended under rule 108(2) of those Rules, but only to 11 April 2008. It will therefore be necessary for the applicant to request a further discretionary extension under rule 108(3) if the application is to proceed, and under rule 108(7) the request must be made by 11 June 2008. Rule 108(3)(b) requires evidence to be furnished in support of a request, except where the comptroller otherwise directs, and in the particular circumstances of this application I direct that evidence will not be necessary.
- 22 Such a request will only extend the compliance period to 11 June. If the application is not in order by that date, it will not proceed unless a further extension of the compliance period is requested and allowed under rule 108(3). This will be a matter for the examiner to consider if necessary.

Appeal

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

R C KENNEL

Deputy Director acting for the Comptroller