



## PATENTS ACT 1977

APPLICANT Fox Entertainment Group

ISSUE Whether patent application numbers GB 1008676.7  
and GB 1300718.2 comply with section 1(2)

HEARING OFFICER J E Porter

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### DECISION

#### Introduction

- 1 Patent application GB 1008676.7 entitled "System for distributing digital media to exhibitors" results from the entry into the UK national phase of international patent application PCT/US2008/085511, in the name of Fox Entertainment Group. The international application was filed on 4 December 2008, with a claim to a priority date of 4 December 2007. It was published as WO 2009/073775 on 11 June 2009, and was reprinted as GB 2 468 422 A after entering the UK national phase.
- 2 Following amendment of the claims and several rounds of correspondence between the examiner and the applicant's attorneys, the examiner remains of the view that the claimed invention is excluded from patentability under section 1(2).
- 3 With the position unresolved, the applicant asked to be heard. The applicant asked that I also hear them in respect of a divisional application, GB 1300718.2. This application, also entitled "System for distributing digital media to exhibitors", was lodged on 15 January 2013 but is to be treated as having the filing date of the earlier application. It was published as GB 2 495 252 A on 3 April 2013. The examiner is of the view that the claimed invention of the divisional application is also excluded from patentability under section 1(2).
- 4 Both matters came before me at a telephone hearing on 22 April 2013. The applicant was represented by patent attorney Mr Martin Hagmann-Smith from Marks and Clerk LLP. The examiner, Mr Mark Simms, was also present.

#### The inventions

- 5 The inventions of both applications are concerned with the secure distribution of digital media content – and in particular the secure distribution of digital feature films to trusted digital cinema outlets. The specifications set out how a digital cinema master, such as a film generated by a film studio, is input into a "packaging platform".

This transforms the digital master into encrypted digital cinema packages, which can then be distributed and viewed at remote locations.

6 The packaging platform, with access to a digital encryption key platform, generates one or more encrypted files. These encrypted files may comprise various components of the film, such as picture, sound, reel number, subtitles in a certain language etc, and they are generated based upon booking information from the outlet in question. This information is obtained via an interface with a booking component. Together, these encrypted files make up a version of the film to be distributed to the outlet in question.

7 The latest claim set on the earlier application (“GB10”) was filed on 5 December 2012. There are 32 claims, but only claim 1 is independent. It reads:

*A system for administering a digital media distribution process, comprising:*

*a central database system, including:*

*a booking component that contains information about available encrypted digital media content and processes bookings for a media viewing;*

*an encryption key component that delivers or provides access to an encryption key necessary to display the encrypted digital media content, wherein encryption keys are automatically generated from encryption databases in response to bookings made for specific viewings, and specific trusted viewing equipment.*

8 Just prior to the hearing, the applicant suggested an alternative form of claim 1 for consideration, in the event that I were to find the claim unallowable as it stands. The suggested alternative form has the following wording added to the end of the claim:

*wherein the encryption key component is arranged to deliver or provide access to said encryption key only in response to bookings made for specific viewings, and specific trusted viewing equipment.*

9 The claim set on the divisional application (“GB13”) is unamended from that as lodged. There are 20 claims, but only claim 1 is independent. It reads:

*A system for packaging digital media for distribution, comprising:*

*a packaging component, wherein said packaging component securely converts unencrypted, uncompressed media into encrypted media files;*

*an encryption key component that delivers or provides access to an encryption key necessary to display the encrypted digital media files, wherein encryption keys are automatically generated from encryption databases in response to a packaging request from an authorized user or authorized terminal; and*

*a packaging component, wherein said packaging component is configured such that an authorized user or authorized terminal may generate an arrangement of plural encrypted media files that together comprise a packaged media.*

10 At the hearing, I agreed that a similar alternative form of claim 1 could be provided for GB13. The applicant subsequently suggested an alternative form of claim 1, with the following wording added to the end of the claim:

*wherein encryption keys are automatically generated from encryption databases in response to a packaging request only from an authorized user or authorized terminal; and*

*wherein said packaging component is configured such that only an authorized user or authorized terminal may generate the arrangement of plural encrypted media files that together comprise the packaged media.*

## **The law**

- 11 Section 1(2) declares that certain things are not inventions for the purposes of the Act, as follows:

*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.*

- 12 The examiner and the applicant agree that the assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*<sup>1</sup>, as further interpreted by the Court of Appeal in *Symbian*<sup>2</sup>.
- 13 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 what is often called “excluded matter”, as follows:

*Step one: properly construe the claim*

*Step two: identify the actual contribution (although at the application stage this might have to be the alleged contribution)*

*Step three: ask whether it falls solely within the excluded matter*

*Step four: check whether the actual or alleged contribution is actually technical in nature.*

- 14 Subsequently, the Court of Appeal in *Symbian* 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.
- 15 The attorney’s submissions in response to the examination reports and at the hearing covered various points concerning how the *Aerotel* test should be applied to

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<sup>1</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan’s Application* [2006] EWCA Civ 1371, [2007] RPC 7

<sup>2</sup> *Symbian Ltd’s Application* [2008] EWCA Civ 1066, [2009] RPC 1

the inventions in question. I consider these submissions as a part of my analysis below.

### **Arguments and analysis – GB10**

- 16 The examiner maintains that the claims of GB10 define an invention which consists of a program for a computer and a method of doing business. His position is set out most recently in his pre-hearing report of 10 April 2013. Arguments against the examiner's position are contained in the applicant's responses of 5 December 2012 and 15 April 2013. Various points were explored with the applicant's attorney during the hearing, and I allowed a further submission to be made by the applicant after the hearing, which was received on 29 April 2013.
- 17 Taking all the arguments raised into account, I must determine whether the claimed invention relates solely to excluded subject matter under section 1(2).

#### Construing the claims

- 18 The applicant has not taken issue with the examiner's construction of independent claim 1, and no discussion of this step occurred either in the written submissions or at the hearing (other than in relation to a point made about an alternative claim 1 – of which, more below).
- 19 Claim 1 concerns a system for administering a process of digital media distribution. This comprises a central database system, which itself includes two components. A booking component, which contains information about available encrypted digital media content, processes bookings which are received for media viewing. An encryption key component either delivers or provides access to the encryption key which is needed to display the content in question.
- 20 The encryption key is automatically generated from encryption databases "in response to" bookings made for specific viewings and specific trusted viewing equipment. It seems to me there is a potential argument that this could perhaps mean simply that the receipt of a booking for a specific viewing and on specific equipment acts as a prompt for the system to generate an encryption key of some unspecified sort. However, no issue has been made of this previously and, in light of the description, I am prepared to accept that this phrase means that the encryption key is specific to, and based upon, certain details of the booking and/or the booker that have been provided.

#### Identifying the contribution

- 21 In paragraph 43 of *Aerotel*, it is made clear that identifying the contribution is probably best summed up as determining what the inventor has really added to human knowledge, and this involves looking at the substance and not the form of the claims (as construed in step one). However, the court in *Aerotel* acknowledged that, for a patent application (as opposed to a granted patent), it may only be possible to identify the alleged, and not the actual, contribution.
- 22 The examiner's view is that the contribution made by the invention is to provide a way of distributing digital media, in which encryption keys are automatically

generated from encryption databases in response to bookings made for specific viewings and specific trusted equipment. He says that the contribution does not extend either to the hardware used or to the encryption algorithms – both of which he regards as conventional. He points out that there are no technical details of the encryption included in the specification and that the preferred encryption algorithm is the Advanced Encryption Standard, which is well-known.

- 23 Before I turn to the applicant's main arguments in relation to the contribution, it is worth noting at this stage that the applicant accepts that the encryption software is conventional (albeit that it deals with different inputs from those in the prior art).
- 24 The applicant also accepts that the hardware components which make up the system are themselves conventional. At the hearing, this raised the question as to whether those conventional components are arranged conventionally, or whether the individual conventional components are arranged in a new way. I allowed written submissions on this point to be made after the hearing, and these were received on 29 April 2013.
- 25 In those submissions, the attorney argues that specific embodiments of the claimed invention are possible in which that invention is implemented through a new combination of hardware alone. The attorney suggests that a system could, in such an embodiment, comprise:
- separate hardware components of a central database system, a booking component and an encryption key component, which are physically connected (via a cable, for example) to a specific trusted viewing equipment....[T]he encryption key component could be arranged such that it is physically inaccessible by a user via a user interface when in use and only connected to and accessible by the booking component.*
- 26 The attorney points out that such an arrangement is not disclosed in the prior art documents discussed with the examiner in relation to novelty and inventiveness, but is clearly within the scope of the claimed invention. He also contends that such an arrangement could be conceived with both hardware and software components, but it would still amount to a new combination of hardware, albeit with software elements.
- 27 The attorney does not go so far as to say that the *only* embodiments of the invention are those where there is a new arrangement of hardware – he puts it no higher than it being so “at least for certain embodiments”. Thus it is the case that the invention can be put into effect using conventional components which are arranged to connect and interact in a conventional way. Given this fact, I think the specification would have to contain a very clear steer to the skilled person not to follow the conventional arrangements, if the attorney's argument on this point were to succeed. I have read the specification carefully but I can see no suggestion, explicit or clearly implied, to the skilled person that a new and inventive arrangement of the hardware components could be envisaged.
- 28 Therefore, even if certain new and inventive arrangements which fall within the scope of the claims could now possibly be envisaged, I am not persuaded that the claimed invention, read in light of the specification, teaches the skilled person that it is to be implemented using a new arrangement of hardware.

- 29 This also deals with the attorney's submission at the hearing that I consider paragraphs 50 to 57 of *Aerotel*, where the Court made clear, on the facts of that case, that the contribution was a new system which comprised a new arrangement of known hardware components.
- 30 However, I agree with the attorney's submission that it does not necessarily follow, when a particular aspect of a system is known, that any contribution made by that aspect can be dismissed. What is required is to assess the contribution made by the claimed invention as a whole, and so the interaction between the various aspects (known or otherwise) needs to be considered when making that assessment. The attorney, at the hearing, gave an illustrative example of this, suggesting that the first (and, he argued, entirely patentable) self-service supermarket check-out system could be said to have comprised new software working in conjunction with conventional scanning, weighing and other hardware components.
- 31 Thus it is the applicant's main contention that the contribution made by the present invention as claimed is a new system, comprising hardware and software components working together. They argue that the contribution made by the conventional hardware and conventional encryption algorithms cannot simply be disregarded. They say that "together such components are arranged to implement the novel and inventive feature of automatically generating encryption keys in response to bookings made for specific viewings and specific trusted viewing equipment". Regardless of whether conventional components are used, what is provided, it is argued, is a more secure system for distribution of digital media.
- 32 It is worth at this point reviewing briefly what the prior art contains. In particular, the "Digital Cinema Primer" from March 2007, cited by the examiner at an earlier stage in the proceedings, shows that it was known before the priority date to create a digital cinema distribution master and then encode or encrypt that master version in order to create a digital cinema package – that package being a set of files that result from the encoding, encryption and packaging process. The document also refers to the "Composition Playlist" which is generated for any particular presentation of the media, and which contains all of the information on how the files are to be played. There is a diagrammatic reference to the booking of content as a step prior to the generation of the encryption keys. The document indicates that the encryption keys are only generated for devices which are on a trusted device list.
- 33 I now return to the present invention. While it is of course the case that the hardware and the encryption algorithms are a necessary part of the system as claimed, I am not persuaded that what has really been added to the sum of human knowledge by the claimed invention can fairly be characterised broadly as a new, complete system. It seems to me that, in most respects, the system is essentially operating at a technical level in the way that a prior art system does – in terms of the steps taken to encrypt and package a digital cinema master and create a digital cinema package, along with a Composition Playlist, to be shown on a particular device or outlet. The difference is the particular approach taken to generating the encryption keys – done so automatically on the basis of the booker's information and equipment.
- 34 Having read the specification carefully, I do not see that the case has been made out for saying that, overall, what has been created is a more secure system than those set out in the prior art. As has already been highlighted, the levels of encryption

used are the same as prior art systems. Furthermore, prior art systems appear to be able to limit viewings to specific trusted equipment or otherwise control the viewing of the digital cinema package. However, it is clear that the present invention takes a different route to achieving this outcome, which results from automatically generating the encryption keys in the way set out – and that is where the contribution lies.

- 35 I find that the contribution made by the claimed invention is a different way of generating encryption keys within a system for secure distribution of digital media, in which the encryption keys are automatically generated in response to booking information and are for specific viewings on specific trusted equipment.

Does the contribution fall solely within excluded matter / is it technical in nature?

- 36 What I must now decide is whether the contribution identified above relates solely to a program for a computer or a method of doing business. This corresponds to step three of the *Aerotel* test.
- 37 The fourth step of the test is then to check whether the contribution is technical in nature. In paragraph 46 of *Aerotel* it is stated that applying this fourth step may not be necessary because the third step should have covered the question. This is because a contribution which consists solely of excluded matter will not count as being a “technical contribution” and thus will not, as the fourth step puts it, be “technical in nature”. Similarly, a contribution which consists of more than excluded matter will be a “technical contribution” and so will be “technical in nature”.
- 38 In this case, the arguments concerning whether the invention is excluded are very much wrapped up with the question of whether the contribution is technical in nature. Given that, I have considered the third and fourth steps together.
- 39 The examiner’s contention is that automating the generation of the encryption keys is no more than a computer program per se, and that doing so based upon the booker’s information (as opposed to some other basis) is a pure business method. He says that, in the absence of technical details concerning the encryption algorithms, key generation or the trusted equipment, the contribution made by the invention is not a technical one. In response, the attorney put forward a number of counter-arguments, which I shall consider in turn.
- 40 First, he says that there is a technical effect achieved by the invention as claimed because it has an effect on a process which is carried on outside the encryption key component. The technical effect of the invention is not limited to software but is “felt in the physical world i.e. access to the media would be physically restricted to certain users/equipment”. He argues that this is a “signpost” pointing to non-exclusion of the subject matter.
- 41 This is an implied reference to the first of five “signposts” set out by Lewison J (as he then was) in his judgment in *AT&T / CVON*<sup>3</sup>. It is established that these signposts can be helpful (but no more than that) in indicating whether there is a relevant

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<sup>3</sup> *AT&T Knowledge Ventures’ Application and CVON Innovations Ltd’s Application* [2009] EWHC 343 (Pat), [2009] FSR 19

technical contribution. The first signpost is “whether the claimed technical effect has a technical effect on a process which is carried on outside the computer”.

- 42 In this respect, I have found that the contribution is confined to a particular way of generating encryption keys, rather than being to a new system as a whole. In the context of that finding, I do not see that what has been provided delivers a technical effect on a process carried on outside the computer. The process of automatically generating encryption keys using encryption algorithms and based on certain data is one that takes place in software and entirely within a computer. Signpost (i) does not point towards patentability in this case, and no arguments were made in relation to the other signposts.
- 43 A second line of argument is that the invention provides technical solutions to technical problems. One such problem is said to be “how to distribute digital media such that only a specific trusted viewing equipment can receive encrypted digital media”. Another is said to be how to deliver a digital film in such a way as to stop it being shown on multiple screens or multiple times, if that is not within the terms of the booker’s licence.
- 44 These arguments are tied up with those on similar points in relation to the assessment of the breadth of the contribution made by the invention – and the broad contention that the system is one with improved security. I have already dealt with those points in paragraphs 33 and 34, where I find that prior art systems appear to be able to limit viewings to specific trusted equipment or otherwise control the viewing of the digital cinema package, and so the present invention does not appear to solve a technical problem of the breadth suggested to me. Whilst it offers an alternative way to achieving these outcomes, that alternative is defined by the choice of data upon which to base the encryption. On the basis of the information I have before me, I cannot see what is “technical in nature” about that choice, or what technical advantages are provided in terms of security, over and above those available in the prior art systems.
- 45 To summarise – the program operates so as to generate encryption keys based on particular, selected data. This data is different from data that has been used in the prior art – although the encryption algorithms and standards are the same. I cannot identify a technical contribution that arises specifically as a result of that data choice. It follows that I do not see how the encryption processing, based on particular data, is more than the operation of a computer program *per se*.
- 46 In terms of the business method objection, the attorney points out that the system is effectively a “tool to implement a digital media distribution process according to certain rules” – and that a new and inventive tool is patentable even if it can be used in a commercial context. More widely, he says that claim 1 defines a new and inventive system for digital media distribution, which must be more than a business method. The claim is not specific to a particular business method or arrangement between the parties involved.
- 47 The point about what claim 1 defines must fall away, as I must assess whether the contribution (as defined in step 2) is technical, not whether the features of the claim as a whole are technical. But on a more specific point, the contribution concerns a different way of generating encryption keys, and I do not see how such a task can



fairly be said to fall within the realm of a scheme, rule or method for doing business, even if the particular data chosen relates in some way to business activity.

- 48 Nevertheless, as a result of being no more than a program for a computer, the contribution made by the invention fails to comply with steps three and four of the *Aerotel* test and so the invention falls solely within excluded matter.

#### The alternative wording for claim 1

- 49 At the hearing, the attorney explained he had some concern that claim 1 could potentially be misunderstood to be overly-broad. This was because it does not state explicitly that the encryption keys (which are automatically generated in response to bookings made for specific viewings or specific equipment) are then used so as to deliver or provide access only in response to bookings made for specific viewings and specific trusted viewing equipment. In other words, it could be said that the claim allowed a key to be generated in response to a booking request but which could then be used for other purposes and not (for example) for specific viewing equipment.
- 50 I should emphasise that the attorney made clear he did not think this was the right interpretation of the claim, in light of the description, but the alternative claim was a way of putting the matter further beyond doubt.
- 51 In the event, I have assessed the contribution arising from the claim as it stands as being a different way of generating encryption keys within a system for secure distribution of digital media, in which the encryption keys are automatically generated in response to booking information and are for specific viewings on specific trusted equipment. My view is that this is inherently a part of the contribution when the claim is read in light of the description. Thus I do not think that the alternative claim 1 wording alters my assessment of the contribution made by the invention as claimed. It must follow that alternative claim 1 also defines an invention which is excluded from patentability.

#### **Arguments and analysis – GB13**

- 52 As noted above, GB13 is an application divided from GB10, and was lodged on 15 January 2013. A combined search and examination report was issued on 29 January 2013, in which the examiner set out briefly his view that the invention as claimed is excluded from patentability. There have been no subsequent exchanges between the examiner and the applicant, other than a request by the applicant that I consider the divisional application within the scope of the hearing and this decision. The examiner's pre-hearing report of 10 April 2013 confirms that he maintains his view that the claims of GB13 define an invention which consists of a program for a computer and a method of doing business.
- 53 At the hearing, I asked the attorney whether he agreed that GB13 would stand or fall along with GB10. The attorney said that he suspected the applications would stand or fall together, provided both are said to be novel and inventive. The attorney did not put forward any arguments specifically in relation to the claims of GB13.

- 54 However, he did explain that the claims of GB10 are intended to be focussed on, or take a view of the system from, the “cinema” side of the system and are limited to specific trusted cinema equipment. The claims of GB13 are intended to be focussed on, or take a view of the system from, the “distributor” side of the system. Thus, he said, the claims of GB13 concern generating encryption from the distributor end but are silent as to the factors which go into making a particular encryption. The claims, he said, do not focus on why there is a packaging request in the first place.

#### Construing the claims

- 55 Claim 1 concerns a system for packaging digital media for distribution. The system comprises a packaging component which securely converts unencrypted, uncompressed media into encrypted media files. This packaging component is configured such that an authorised user or terminal may generate an arrangement of plural encrypted media files that together comprise a packaged media.
- 56 The system also comprises an encryption key component which either delivers or provides access to an encryption key which is needed to display the encrypted media in question. The encryption keys are automatically generated from encryption databases in response to a packaging request from an authorised user or terminal.

#### Identifying the contribution

- 57 For the reasons given above in relation to GB10, I do not agree that, overall, the contribution can be said to be a new or better system involving both hardware and software. In my view, the contribution in GB13 similarly relates to a different way from the prior art systems of generating encryption keys within a system for secure distribution of digital media. In the case of GB13, the encryption keys are automatically generated in response to a packaging request from an authorised user or terminal.

#### Does the contribution fall solely within excluded matter / is it technical in nature?

- 58 Following my reasoning in relation to GB10, my view is that the contribution I have identified in relation to the claimed invention of GB13 falls within excluded matter and is not technical in nature. The automatic encryption processing, based on particular data, is no more than the operation of a computer program *per se*.
- 59 Again by following my reasoning in relation to GB10, I do not agree that the invention of GB13 can be said to be purely a scheme, rule or method for doing business.

#### The alternative wording for claim 1

- 60 The alternative claim provided in relation to GB13 has two additional paragraphs. The first additional paragraph is concerned with the automatic generation of encryption keys. It repeats the existing wording of the claim which states that encryption keys are automatically generated in response to a packaging request from an authorised user or terminal, but inserts the word “only” before “from an authorised user or authorised terminal”.
- 61 The second additional paragraph is concerned with the configuration of the packaging component. It repeats the existing wording of the claim which states that

the packaging component is configured such that an authorised user or terminal may generate the arrangement of media files, but inserts the word “only” before “an authorised user or authorised terminal”.

- 62 The implication of adding the word “only” in these two places is that, without them, the existing claim could be understood to cover a system which works not just for authorised users or terminals, but for other (unauthorised) ones too. Construing the existing claim in that way would allow it to encompass the automatic generation of encryption keys in response to a packaging request from an unauthorised user or terminal, and the configuration of a packaging component such that an unauthorised user or terminal could generate the arrangement of media files.
- 63 Such a construction clearly flies in the face of the description and the problem that the invention is aimed at solving. The existing form of claim 1 should in my view clearly be construed as working for authorised users or terminals to the exclusion of unauthorised ones. That being so, I do not think that clarifying this by adding the word “only” before “authorised user or terminal” changes the conclusions I have reached on the allowability of the invention as claimed. Alternative claim 1 also defines an invention which is excluded from patentability.

### **Conclusion**

- 64 I conclude that the claimed inventions of GB10 and GB13 are excluded from patentability under section 1(2)(c) because they are each no more than a program for a computer.
- 65 Based on the information before me, I cannot identify any further material within the specifications upon which patentable claims might be based. I therefore refuse the applications under section 18(3) for failure to comply with section 1(2)(c).

### **Appeal**

- 66 Any appeal must be lodged within 28 days.

**Dr J E PORTER**

Deputy Director, acting for the Comptroller