



PATENTS ACT 1977

APPLICANT Direct TV Pty Ltd

ISSUE Whether patent application number
GB 0800217.2 complies with section 1(2)
of the Patents Act

HEARING OFFICER Mr. Gareth Griffiths

DECISION

Introduction

1. International patent application PCT/AU2006/001019 entitled “Presentation content management and creation systems and methods” was filed in the name of Direct TV Pty Ltd on 19 July 2006, claiming a priority date of 19 July 2005, and was published as WO2007/009180 on 25 January 2007. A request for national processing was filed on 7 January 2008 and the international application was given the UK application number GB 0800217.2. This application was subsequently re-published as GB 2442166 on the 26 March 2008.
2. Following amendment of the claims and several rounds of correspondence between the examiner and the applicant’s attorneys, Gill, Jennings and Every LLP, the examiner remained of the view that the claimed invention is excluded from patentability under section 1(2). With the position unresolved, the applicant requested a hearing.
3. A hearing was held on 22 March 2011. The hearing was conducted by video conference. The applicant was represented by Mr. Peter Thorniley and Mr. Stephen Haley of Gill, Jennings and Every LLP. Also in attendance were hearing assistant Mrs. Emma Porter and the examiner Mr. Jake Collins.

The application

4. The application relates to the production of flexible media presentations, in which the content of at least some of the presentation can be varied as the media presentation is displayed on a device such as a CRT or LCD screen.
5. The media presentation is created by a controller which selects static and dynamic media components (audio, video, images etc.) from a database and schedules or combines them into a presentation. Static media components are predetermined and unalterable. Dynamic media components have variable "attributes" which are determined at run-time as the presentation is being displayed. The variable attributes include colour, opacity, position, size, duration, volume, layer order, text size, text style and/or blend level transparency. An attribute may be determined according to parameters such as the time the presentation is being displayed, the location of the display, the type of output device, the date and/or the genre. External inputs from motion or sound detectors can also be used to dynamically control which components are selected and the values of the variable attributes. The end result is a media presentation for display which is tailored according to such things as the time of day and whether someone is in the vicinity and so likely to be watching.
6. The latest claims set, which was filed on 4 February 2011, comprises 3 independent claims, numbered 1, 15 and 26.

Claim 1 reads as follows:

A presentation content management and creation system comprising:

a database of sorted media components including audio components, visual components and dynamic components, the dynamic components allowing changes to be made to the media components of a scheduled real time media presentation;

a controller coupled to be in communication with the database, the controller comprising a scheduler module for scheduling audio, visual and dynamic components selected from the database into the scheduled real time media presentation;

at least one output device coupled to be in communication with the controller for outputting the real time media presentation;

wherein the real time media presentation is rendered by a renderer module of the controller as it is being displayed by the at least one output device;

wherein rendering of the real time media presentation comprises controlling and modifying, in response to one or more inputs to the controller and one or more associated parameters, one or more attributes of the one or more selected dynamic components of the scheduled real

time media presentation to control and modify the appearance of the real time media presentation displayed by the at least one output device.

Claim 15 reads as follows:

A controller for a presentation content management and creation system, said controller comprising:

a scheduler module for: selecting media components from a database of sorted media components including audio components, visual components and dynamic components, the dynamic components allowing changes to be made to the media components of a scheduled real time media presentation; and creating a play-list of scheduled audio, visual and dynamic components; and

a renderer module for rendering the scheduled audio, visual and dynamic components into the real time media presentation as it is displayed by at least one output device coupled to be in communication with the controller;

wherein rendering of the real time media presentation comprises controlling and modifying, in response to one or more inputs to the controller and one or more associated parameters, one or more attributes of the one or more selected dynamic components of the scheduled real time media presentation to control and modify the appearance of the real time media presentation displayed by the at least one output device.

Claim 26 reads as follows:

A method of creating and presenting a real time media presentation including:

selecting media components from a database of sorted media components, the database including audio components, visual components and dynamic components, the dynamic components allowing changes to be made to the media components of a scheduled real time media presentation;

creating a playlist of scheduled audio, visual and dynamic components;

rendering the scheduled audio, visual and dynamic components into a real time media presentation as the real time media presentation is displayed by at least one output device; and

controlling and modifying, in response to one or more inputs to a controller and in accordance with one or more associated parameters, one or more attributes of the one or more selected dynamic components of the scheduled real time media presentation to control and modify the appearance of the real time media presentation displayed by the at least one output device.

7. Claims 15 and 26 essentially follow the same steps as claim 1. They share the same inventive concept and will therefore stand or fall together on the issue of patentability.

The law

8. 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.

9. The examiner and the attorney agreed that the assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*¹. In this judgment, 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.

10. Subsequently, the Court of Appeal in *Symbian*² 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.

11. I will therefore consider the independent claims with regard to each of the steps of the *Aerotel* test in light of *Symbian* in order to determine the patentability of the invention.

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

Applying the four step test

Step 1 –Properly construe the claim

12. There does not appear to be a great deal of difficulty in construing the three independent claims. During the processing of the application it was noted that the term “*appearance* of the real time media presentation” should not be limited to the visual aspects of the presentation, but should also include the audio aspects of the real time media presentation. At the hearing the attorney agreed with this construction.
13. Claim 1 sets out that the presentation content management and creation system comprises a database of media components, including dynamic and static components, a controller comprising a scheduler module, for scheduling components from the database into the scheduled real time media presentation, the controller also comprising a renderer module to control and modify one or more attributes of the dynamic components of the scheduled real time media presentation as it is displayed on an output device, the control and modification being in response to one or more inputs to the controller and one or more parameters.
14. Claim 15 is directed to a controller comprising a scheduler module, for scheduling components from a database of dynamic and static components into a scheduled play list, the controller also comprising a renderer module to control and modify one or more attributes of the dynamic components of the play list as it is displayed on an output device, the control and modification being in response to one or more inputs to the controller and one or more parameters.
15. Claim 26 relates to a method of creating and presenting a real time media presentation which comprises selecting media components from a database of dynamic and static media components to create a scheduled play list, rendering the scheduled play list into a real time media presentation as it is displayed on an output device, wherein the rendering step comprises controlling and modifying one or more attributes of the dynamic components of the play list, the control and modification being in response to one or more inputs to a controller and one or more parameters.

Step 2 –Identify the actual contribution

16. Paragraph 43 of *Aerotel/Macrossan* confirms that identifying the contribution involves looking at the substance of the claimed invention, rather than the form of the claims, to determine what the inventor has added to the stock of human knowledge. This may involve looking at the problem to be solved, how the invention works and what its advantages are.
17. The attorney considered the contribution to lie in a number of technical

advantages provided by the system in use. He made a distinction between the features of the claims which reflected the differences between the invention and the prior art, and the contribution which he considered to lie in the advantages. He drew my attention to *Symbian* in which the contribution was not limited to the claimed features of the invention, but could arise as a consequence of the claimed features as well. Specifically he said “the claimed features were the differences between the invention and the prior art but the contribution goes further than that”. He quoted paragraph 59 of *Symbian*, in which the Court of Appeal identified the contribution as:

‘A program which makes a computer operate on other programs faster than prior art operating programs enabled it to do by virtue of the claimed features’.

18. He reiterated that the advantages he identified arose by virtue of the claimed features. In my view that must be right and I shall now go on to consider each identified advantage in turn.

Reduced storage requirement

19. The attorney explained that a reduced storage requirement is a consequence of the dynamic and flexible method of generating the media presentation. It allows a tailored media presentation to be provided to the user without a requirement to store a myriad of different potential media presentations to be shown to the user under different circumstances. Furthermore, for a single media presentation, the file size for the same content is much less than the prior art. I agree that this is an advantage arising directly from the claimed invention.

Reduced bandwidth requirement

20. The attorney stated that an advantage of a reduced bandwidth requirement arises when transmitting the dynamic media components across a network. This was said to occur in two ways. Firstly, there is no need to transmit multiple versions of components because the dynamic components of the invention are modifiable at the output device. Secondly, due to the type of media components used, the media presentation of the invention used less bandwidth in transmission than a single media presentation file of the prior art.
21. There is little detail of transmission and bandwidth reduction in the application as filed. A small comment on page 4 line 23 to page 5 line 3 states that “*pre-produced media components, such as video files, tend to be large and take longer to distribute. The large file size does not allow distribution of the media to be prompt if such distribution needs to be done across a network, such as the internet.*” The transmission of media components across a network is not included in the claims and bandwidth reduction does not appear to arise directly from the claimed invention. Indeed, the majority of the embodiments of the invention (as show in

Figures 1, 2, 5 and 6) do not require transmission across a network at all. The attorney accepted that there was no specific description on this but stated that it was an advantage of the invention nonetheless. I accept that if the media presentation of the invention was to be transmitted over a network, there would be a consequential reduction in the bandwidth requirement over the prior art.

Increased processor performance

22. The attorney argued that the system of the invention required less processing power to create and reproduce the same content as the prior art. A more efficient program would result in less processor power being used, which does appear to me to be an advantage arising from the claimed invention.

Increased flexibility

23. The presentation content management and creation system as described and claimed indisputably results in increased flexibility of the presentation created.
24. In determining what has been added to the stock of human knowledge, I have also found it useful to review the processing history of the application and the amendments which were made to more clearly distinguish the invention from the prior art, in addition to considering the substance of the invention. The examiner had accepted that the latest claims filed were both novel and inventive which is a great help in assessing the contribution. I have also considered the advantages proposed by the attorney.
25. In my view, the contribution made by the invention as a whole is a presentation management and creation system in which a presentation is created from static and dynamic media components, wherein attributes of the dynamic media components are modified as the presentation is displayed, the modification being in response to one or more inputs to a controller and one or more parameters. This has advantages in the efficient use of storage, the efficient use of processor power and the flexibility of the presentation which can be displayed. If the stored presentation was transmitted over a network it would require a reduced bandwidth.

Steps 3 and 4: Does the contribution fall solely within the excluded subject matter and is it actually technical?

26. What I must do now is decide whether the contribution relates solely to one or more of the matters which are excluded from patentability under section 1(2).

27. It is clear that the system and method of the invention is implemented as a program on a computer. There was no argument to the contrary on this.
28. The attorney argued that the invention provides a technical contribution which does not fall within the excluded subject matter, in that the computing system programmed with the presentation content management and creation system is a better computer exhibiting increased processor performance. He referred to paragraph 56 of *Symbian* where the Court of Appeal said :

“...a computer with this program operates better than a similar Prior Art computer. To say ‘Oh but that it only because it is a better program – the computer itself is unchanged’ gives no credit to the practical reality of what has been achieved by the program. As a matter of such reality there is more than just a ‘better program’ there is a faster and more reliable computer.”

29. The attorney added that they now have a device, “a *technically superior piece of kit*”, which is able to do things which it wasn’t able to do beforehand. It has greater flexibility in the video it can produce. Additionally, the computer performs more efficiently. He went on to say that it would not just be computers which benefited, but all manner of devices in which it the program can be embodied. Reduced storage requirements and reduced processor load are even more important in smaller devices, such as tablet computers.
30. The attorney accepted that the underlying hardware of the computer system was unchanged but maintained that a computer program running on top of the hardware is patentable if it creates something above and beyond a mere program. I agree but there is a distinction to be made between a program which makes the computer work better in general, for example by making other programs or applications run faster (i.e. a technically better computer), and a program which is merely a better application which is faster than prior art applications.
31. The invention is implemented as a computer program on conventional hardware. But does this result in a technically better computer system? One of the advantages of the system is the reduced storage requirement for a flexible presentation. However, the reduction in memory space and any decrease in the required processing power to run the program do not, to my mind, mean a technically better computer system. It is agreed that the underlying computer hardware is conventional and unchanged. This means its processing power, speed and memory are fixed at an architectural level. The reduction in memory space and decreased processing power required to run the program are, in my opinion, improvements in the computer program rather than the hardware. Modifications in the operating system of a computer (at a higher architectural level than the hardware) can be considered to be technical and therefore patentable, but this program sits squarely in the application layer. Such a program which is smaller or more efficient than an older

program is still no more than a program. It seems to me that this contribution amounts to no more than a smaller, cleverer program for creating and presenting a real time media presentation.

32. Turning to the issue of bandwidth reduction. The invention allows the quantity of transmitted data to be reduced. However, the technical problem of prohibitive bandwidth requirements for transmitting large quantities of data remains. The attorney argued that in *Symbian* a problem in the programming was solved by reprogramming in a different way. This could be seen as “circumventing” the problem but was considered patentable.
33. It seems to me that *Symbian* is not helpful on this point. Transmitting less data does not solve a technical problem in transmission in a way which is comparable to the technical problem solved in *Symbian*. It is clearly avoiding or circumventing the problem of transmitting large amounts of data quickly. It does not in any way change the way in which data is transmitted.
34. The applicant added that if it was found that it wasn't a technically better computer system, just a computer that worked better at this particular aspect, then it could still be technical and patentable as was found in *Vicom*³. We are reminded that decisions of the EPO Boards of Appeal have “great persuasive authority” in paragraph 6 of *Aerotel*.
35. The invention in *Vicom* concerned a mathematical method for manipulating data representing an image, leading to an enhanced digital image. The EPO Technical Board of Appeal rejected claims to a method of digitally filtering data performed on a conventional general purpose computer, since those claims were held to define an abstract concept not distinguished from a mathematical method. However, they allowed claims to a method of image processing which used the mathematical method to operate on numbers representing an image. The reasoning was that the image processing performed was a technical process which related to the technical quality of the image and that even if the idea underlying an invention may be considered to reside in a mathematical method, a claim directed to a technical process in which the method is used does not seek protection for the mathematical method as such.
36. I do not see how this helps the current application. Is this a claim to a “technical process” in which an excluded method is used? To my mind it is not. The presentation management and creation system in question does not apply a mathematical method to real world data. The program of the invention allows the creation of a more flexible presentation using less storage and less processor power, which is not a “technical process” akin to image processing. Furthermore, unlike *Vicom*, the display produced by the invention is not of better quality.

³ *Vicom/Computer-related invention [1987] 1 OJEP 14 (T208/84)*

37. Therefore I consider the contribution as identified above to lie within the excluded field as it is no more than a computer program which produces or compiles media presentations containing less data, which are modifiable as they are displayed, and which do not relate to a “technical process” beyond the software itself.

38. Having reached this conclusion I derive further reassurance from looking at the five “signposts” that may indicate that there is a relevant technical contribution and which would thus overcome an excluded matter objection, as set out by Lewison J in *AT&T/CVON*⁴:

- (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 there is an increase in the speed or reliability of the computer;*
- (v) *whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*

39. The attorney has argued that the technical effect of the invention is an improvement in the processing power and storage efficiency of the computer system. It follows that there is no effect on any process outside the ‘computer’ due to the invention. The display of a presentation can be considered a process carried on outside the computer, but this itself is excluded from patentability under Section 1(2)(d) as the presentation of information.

40. The claimed technical effect does not operate at the level of the architecture of the computer nor does it result in the computer operating in a new way. Therefore none of the first three signposts convince me of the applicant’s case.

41. Turning to the fourth signpost, it seems to me that the overall system has the same processing power but less is needed to run the computer program of the invention. The program is more efficient but the computer on which the program runs does not gain an increase in speed or reliability.

⁴ AT&T Knowledge Ventures LP and CVON Innovations Limited [2009] EWHC 343

42. With regard to the fifth signpost, the perceived technical problem of the prohibitive bandwidth required to transmit large data files is circumvented by the computer program.
43. Therefore I find that the contribution made is a computer program which lies solely within the excluded fields, and is excluded as it is not technical in nature.
44. There was a brief discussion in the hearing over whether the invention, to the extent that it related to a system for creating a flexible media presentation, was also no more than the presentation of information or a business method. In light of my findings above, I do not need to consider this point further.

Proposed correction

45. On page 22 lines 2-6 it is stated that there is a step of uploading to the customer device from the controller *after* the presentation has been rendered. Additionally, in Figure 7 the box labelled "client" is not actually the client, but a box which represents the gathering of client information in a business set up of the device. It was agreed that these features do not fall within the scope of the invention as described elsewhere and as claimed. The applicant proposed a correction in respect of these features, which would make the description of the invention clearer, but having considered the matter carefully, I can see that such a correction would make no difference to the outcome of my decision.

Conclusion

46. I find the application is excluded under section 1(2) as relating to a computer program. Having considered the whole specification, I also find that there are no possible amendments to allow the application to progress to grant and I therefore refuse it.

Appeal

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

G Griffiths

Deputy Director acting for the Comptroller